THE LANCET.

LONDON: SATURDAY, JANUARY 1, 1927.

HOSPITAL ISOLATION OF MEASLES.

THE new policy[1] in respect to the isolation of measles, which has recently been decided upon by the Metropolitan Asylums Board, should help to ameliorate conditions which press hardly on child life in the poorer classes of the metropolis. The scheme, it will be remembered, consists in allocating to the treatment of measles, at times when the disease is prevalent, a large proportion of the beds in the public fever hospitals hitherto assigned to scarlet fever, the fatality of which, in hospital-treated cases, is only about one-tenth of that of measles. Were the number of beds in these hospitals unlimited, the admission of both diseases up to the full requirements would present no difficulties. There would be room for all, and no application for removal in the case of either disease would have to be rejected. Unfortunately, during times of high measles prevalence, the period of which usually extends over three or four months and recurs about every second year, the total number of beds available in the fever hospitals is not commensurate with the requirements of measles alone, and cases can only be received at the expense of scarlet fever. This in effect involves the selection of cases for admission in respect to both diseases if the beds are to be utilised to the best advantage, and opinions may differ as to the grounds on which a case should be regarded as qualifying for admission—whether, for instance, the severity of the attack or the adverse home conditions should be the determining factor. It is, however, admitted that serious lung complications are prone to supervene in measles occurring in a poor home, although the attack may have bid fair to pursue a favourable course at the outset. Then there is the question who is the most suitable person to make the selection—the medical attendant or the health visitor acting as deputy of the medical officer of health. Ultimately no doubt where the available accommodation is limited the decision must rest with the latter official, no matter whether he obtains his information about the case from the general practitioner or through one of his own subordinates. The chief aim is avoidance of delay in procuring admission to hospital, and the system best adapted to secure this is the best for adoption.

In London, equipped as it is with a number of large isolation hospitals, each containing some 400 or 500 beds, it should practically always be possible to allocate to measles a number of separate wards, and the admission of this disease is not attended with the same difficulties as in provincial towns with a population of, say, 30,000 to 150,000, where the fever hospital accommodation is usually limited to 40–80 beds. The difficulties attending any attempt to cater for measles in these circumstances is fully recognised by many of the provincial health officers, who would gladly follow the example of London. Within their limited accommodation these municipal hospitals are designed to receive not only scarlet fever and diphtheria, but on occasion cases of typhoid, cerebro-spinal fever, or encephalitis as well; at the best of times there remain a few cases of scarlet fever and diphtheria under treatment, and a spare ward is rarely available. Consequently, surplus accommodation in the smaller fever hospitals cannot be expressed in terms of spare wards, but as spare beds in occupied wards, which cannot be used for measles. It is true that at Fazakerley, for instance, measles is treated with all other infections in the same ward by the method known as "bed isolation," but for this purpose two safeguards are essential to success—viz., a tried and specially trained nursing staff, and a certain measure of selection of cases. And these conditions would be difficult to secure in the smaller hospitals with their fewer beds and frequently changing staff. When, however, it is possible to spare a small ward for the purpose, it is of paramount importance that removal to hospital should be effected at the earliest possible moment, in order to forestall, if possible, the supervention of capillary bronchitis and broncho-pneumonia. In the selection of cases for removal, both factors—severity of attack and unsuitability of the home environment—should be taken into account if the best results are to be secured. The advent of broncho-pneumonia is, indeed, a very serious handicap, and early removal to hospital is a potent influence in its prevention, but even should this dread complication have already supervened, manifest improvement in the child's general condition often follows admission to a hospital ward, where it meets, perhaps for the first time, with a plentiful supply of fresh air, good food, and proper nursing.

Admittedly difficulties are encountered in catering for measles in the smaller isolation hospitals, indeed they are frequently regarded as insurmountable by the boards which administer the hospitals for infectious diseases. Some of these, as a contemporary trenchantly points out,[2] have "degenerated into penitentiaries where convalescent scarlet fever is prevented from obtaining efficient treatment." In rural areas, at all events, the local board is too apt to take the view that the removal of an infectious patient from the community is the whole object of hospital isolation. Victims of infectious diseases are hurried off to the fever hospital whose staff and equipment fall far short of requirements. Irregularity of demand and the need for economy are mainly responsible for this; it is costly and difficult to secure a rapid increase in the number of experienced nurses in response to a sudden and unexpected call. But the aim of any progressive isolation hospital board should be to give precedence to infections which are serious and need specialised treatment, and to discard segregation as a primary function. Even if only a limited number of serious cases of measles can be received into hospital from among the inhabitants of the poorer districts it is well worth doing. It cannot be too strongly insisted that the saving of life is the main consideration, and the medical officer responsible for the allocation of beds in the local hospital in striving to achieve this end should be free to pursue the course which in his opinion is most likely to prove successful. Where the control of the local isolation hospital is vested in the medical officer of health for the district the limited number of beds at his disposal is likely to be utilised to the best advantage, but where, as is often the case in country

[1] THE LANCET, Oct. 23rd, p. 865, and Nov. 6th, p. 974.

[2] Medical Officer, Dec. 4th, 1926, p. 257.

districts, the control is in the hands of a joint hospital board, the health officer is not infrequently faced with opposition, if not actual obstruction. In circumstances such as these the only course open to him is to make urgent and repeated representation to the controlling authority as to the way in which, in his opinion, existing beds should be allocated, at the same time calling the attention of the board to the responsibility which they must be prepared to shoulder in the event of refusal. Tactful persistence may in the end bear fruit even to the extent of securing extension of existing accommodation.

IMITATION AS A FACTOR IN SUICIDE.

A DISCUSSION on carbon monoxide poisoning, which took place at a recent meeting[1] of the Medico-Legal Society, was concerned with the increase of suicide in this and other countries, and particularly with the frequent use of coal-gas for that purpose. Such a use was almost unknown in this country before 1895, but it now accounts for one-third of the suicides in some Scottish towns, whilst in England the number of suicides by this means has more than trebled in the last six years. Although the addition of water-gas to the domestic supply adds to its toxicity and, according to Dr. DOUGLAS KERR, has been followed by an increase of accidental poisonings, yet the increase of suicide by inhaling coal-gas is an independent phenomenon doubtlessly affected by the publication of detailed reports of the methods used in particular cases. These reports, appropriate enough in a text-book of forensic medicine, have taught the public that in coal-gas is to be found a means of escape from life's troubles that closely fulfils the classical three requirements of successful therapy—*cito, tute et iucunde*. But even when the influence of this knowledge is admitted we cannot be sure that it affects more than the manner of the suicide, for it may be argued that if the one method were not available some other would be used. This is true to some extent, for with the increase of suicides by poison, including coal-gas, there has been a diminution of those in which clumsier means of voluntarily ending life were employed; if it were a general truth it would stultify any precautions by which we seek to impede the obtaining of poisons lest they should be used for suicidal purposes. Yet, though we can only speculate how far opportunity is responsible for suicide and how far we can expect to influence its incidence by precautionary measures, there can be no hesitation in condemning the publication of descriptions of easily achieving the end. There are sources of poison accessible to practically everyone—in gardens and hedgerows, for example—and a sensational case of the use of some vegetable poison, reported with full details, might start a new fashion by providing opportunities that are now lacking through ignorance. It may be fortunate that the story of the death of Socrates has no news value.

To find ourselves advocating that knowledge of easy means of self-destruction should be withheld from the public is, however, a situation that itself invites comment. Imitation and suggestion may be offered in partial explanation of the increase of suicide, but they can only operate in the presence of other determinants. These determinants, so far as they are unknown, constitute the actual problem, and their investigation is imperfect, for obvious reasons. Friends and relatives often testify at an inquest that the deceased had no known reason for his act, and the frequent invocation of "nervous breakdown" hides under an evasive nomenclature our ignorance of causes. The stereotyped verdict of "Suicide whilst temporarily insane" is, of course, a relic of the times when a verdict of *felo de se* involved both denial of religious burial and interference with the rights of successors.

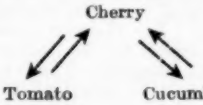
It is probable that relatively few suicides occur among sufferers from the major psychoses; some must be attributed to misfortune or physical illness, which has led to a reasoned decision on the part of the victim; alcoholism, which itself calls for psychological explanation, accounts for others; but, to judge roughly from newspaper reports, a great many occur when the victim has been in a state of emotional disturbance out of proportion to any ascertainable cause. The last group probably accounts for the increasing rate, and since such emotional disturbances are commonly found among the sufferers from the varied psychoneuroses, we may expect to have light thrown upon the increase by turning to the study of such patients. They commonly tell of compulsive thoughts of suicide (but only, as a rule, to those in whom they have confidence), and it is recognised among those accustomed to handling them that a frank discussion of the thoughts is the best means of avoiding their fulfilment. The patient who is without opportunity for this discussion, or avoids it, is in danger of being attracted by any easy means that is offered; he is, we may suppose, the kind of man that is influenced by imitation or suggestion. Whether there is an increase in the incidence of psychoneuroses is another question. The belief is often expressed that such an increase is taking place, but the belief has been current for at least 40 years and may be only a variant of the everlasting lament for bygone days; it is incapable of verification. Modern conditions may, perhaps, offer occasions for manifestations that would otherwise remain latent, and, as a specific instance, the widespread knowledge of the lethal uses of coal-gas may provide opportunities for a particular tendency which might, in the absence of the knowledge, never come to fulfilment.

[1] THE LANCET, 1926, ii., 1218.

THE MECHANISM OF VIRUS INFECTIONS.

MOSAIC disease of the tobacco plant has been of interest to animal pathology because it led to the discovery of the class of infecting agents which are microscopically invisible and able to pass through Berkefeld filters. It was discovered in 1892 by D. IWANOWSKI and called a "contagium vivum fluidum" by M. W. BEIJERINCK, who studied the phenomenon in 1899. It is therefore the first representative of a group of infecting agents now known as "the filterable viruses." As happens so frequently in pathological research, further work on mosaic disease, which was carried out mainly in America, complicated rather than simplified the problem. One line of investigation showed that mosaic disease could be transmitted to plants of widely separated families, while another line gave indications that the same plant may exhibit several different types of the disease. In the genus Solanum, for instance, seven different types of the disease have been described. One line of evidence, therefore, leads to the theory of a single mosaic disease spread widely throughout the vegetable kingdom; the other indicates the existence of a number of distinct types of mosaic disease which may occur even in the same species. Observations on the resistance of the virus of mosaic disease of the tobacco plant show that it is very resistant to drying and heating and to treatment with alcohol up to a strength of 50 per cent. It is also very resistant to

ageing, for the expressed juice retains its infectivity for a very long time—as long as three years. Now the virus of the disease in the cucumber behaves quite differently. The infectivity of the expressed juice disappears rapidly in one or two days, it is destroyed by drying, by treatment with alcohol, and by heating. But the infective agents of both the tomato and the cucumber will pass through a Berkefeld filter and will remain active in dilutions of 1 : 1000. These observations would appear to furnish strong evidence in support of the theory of the dissimilarity of the two diseases. Against this must, however, be set the observation that the disease has been transmitted from the cucumber to the tobacco plant. The disease has not so far been transmitted directly from the tobacco plant to the cucumber, but only indirectly by first infecting the pepper from the tobacco and then transmitting it to the cucumber. The virus of the disease in the tomato behaves towards the various agents mentioned above in the same way as the virus from the tobacco plant—that is to say, it is resistant to ageing, drying, heating, and to treatment with alcohol. Here again the disease cannot be transmitted from the tomato naturally affected with the disease to the cucumber, or vice versa, but it can be transmitted from the ground cherry naturally affected with the disease to the cucumber and vice versa. The ground cherry (physalis) can also be infected with the disease from the tomato, and from the cherry thus infected from the tomato the disease can then be transmitted to the cucumber. The ground cherry can therefore serve as intermediate host of the virus between tomato and cucumber. This relationship can be expressed in the following diagram :—



Up to this point mosaic disease presents an apparently inextricable maze of contradictions. In a recent paper,[1] presented for the degree of Ph.D. at the University of Wisconsin, Mr. M. N. WALKER has attacked the problem and has succeeded in finding a way out. He has studied the resistance of the virus to the various agencies mentioned above in the tomato, the ground cherry, and the cucumber when naturally affected with the disease. He then produced the disease in those three plants by cross inoculation (in the tomato from the ground cherry, in the ground cherry from the tomato, in the ground cherry from the cucumber, in the cucumber from the ground cherry, and in the cucumber from the tomato, using the ground cherry as intermediate host), and studied the behaviour of the virus in these experimentally transmitted diseases. He found that the virus of the disease in the ground cherry was always resistant to ageing, heating, drying, and alcohol, whether the disease had affected the plant spontaneously or whether it had been transmitted to it from the tomato or the cucumber. The same held good for the virus of the disease in the tomato. In the disease of the cucumber the virus was always found to be readily destroyed by these agencies, whether the disease had affected the plant spontaneously or whether it had been transmitted to it from the ground cherry or indirectly from the tomato. The evidence is therefore in favour of a single cause or agent for all mosaic diseases, but the evidence also indicates that the properties of this causal agent may be decidedly changed according to the species of plant which it has infected. Although the author does not say so, the interest of the work on mosaic disease extends beyond the solution of a particularly intricate problem. The phenomena observed in this case will have to be taken into consideration in the investigation of virus diseases in animals. Differences in the susceptibility to such agencies as ageing, drying, heating, alcohol would be considered as reliable evidence for the differentiation of bacteria, or of chemical substances, which cannot be isolated, such as ferments, immune bodies, and so on. But such evidence can no longer be accepted as conclusive for a virus. This peculiarity may possibly be due, in part at any rate, to the loose use of the term "virus." In mosaic disease infection is brought about experimentally by the expressed juice of the plant and to this the term virus is applied. But this extract is merely the vehicle for the infecting agent and contains in addition a great many other substances, the presence of which may affect the resistance of the virus to the various agencies mentioned above, and even its infecting power for a different species of plant, to such an extent as to give to the virus the appearance of a specific pathogenic agent which it does not really possess.

Now, the same considerations hold good for virus diseases in animals. Here, also, the transmission of the infection by tissue extracts or exudates has always been attributed to the presence of a virus by itself, and the presence of other substances which might affect the biological behaviour of the virus has been disregarded. As a result, the same problems have arisen as in mosaic disease of plants. Recent work on foot-and-mouth disease has yielded evidence which is interpreted by some as indicating a plurality of viruses, all of which produce the disease in different species. According to the report of the American Commission, the horse is very resistant to the experimental infection with the virus from foot-and-mouth disease of other species. But it suffers spontaneously from a disease called vesicular stomatitis, which resembles foot-and-mouth disease. Infective material from a vesicle of this disease when injected into guinea-pigs produces typical foot-and-mouth disease. The diseases due to the vaccinia virus present a similar picture. A great many different species of the higher animals are susceptible to the disease. But if the disease occurs spontaneously in one species its infectivity is very often narrowly restricted to that particular species. Thus sheep-pox is spontaneously only infective for sheep and not for goats or other species of animals. If the disease occurs in goats its spontaneous infectivity is restricted to goats, and does not extend to sheep. But experimental transmission can often break through this specificity. In some cases what appears to be a distinct disease has been shown to be due to the vaccinia virus. Thus the infectious disease of horses known as pustulous stomatitis, which breeds true in that species, is produced by a virus indistinguishable from that of vaccinia, so that the disease is, in fact, a different type of the horse-pox of Jenner. Again, the virus of epithelioma contagiosum of fowls is, according to some observers, identical with that of vaccinia, although this identity is denied by others. The similarity of these conditions to those obtaining in mosaic disease of plants is obvious. On the one hand there is the wide distribution through different species. On the other there are the same problems of the curious limitations of infectivity, and they have probably arisen for the same reason that, while by a loose process of reasoning the virus is identified with the infective material, the latter contains other substances which modify the action of the virus. This is very clearly exemplified by the recent work in another group of virus diseases—namely, the filterable malignant neoplasms of the fowl, discovered by Rous. He described three different types of tumours, and a few others have been recorded since by other workers. Each type of tumour yields an extract which will transmit the disease in the same breed of fowls and reproduce exactly the same type of tumour. The pathogenic action of these tumour extracts is, therefore, highly specific, and as the extract was identified loosely with the virus, the specific pathogenic action was attributed to the virus. It thus became necessary to assume a different virus for each type of tumour. But since these filterable malignant neoplasms do not spread by infection, but, like the non-filterable

[1] A Comparative Study of the Mosaic Diseases of Cucumber Tomato, and Physalis, Phytopathology, July, 1926.

malignant neoplasms, arise *de novo* and exhibit a considerable variation in type, it is difficult to form a rational conception of their ætiology on the basis of a multiplicity of viruses. The conception of GYE is that the same virus is responsible for all the different types, but that the infective action of the virus is rendered specific for a certain type of cell by the presence in the extract of a substance produced by the tumour cells—the "specific factor." On this view the pathogenic action of the virus is determined by the presence in the extract of a substance varying with the tissue which has been infected.

It has been questioned whether the filterable fowl tumours are due to a living virus, and various speculative alternative explanations have been suggested. It is, of course, true that an ultramicroscopic virus has not the same concrete reality as a bacterium which can be seen. An ultramicroscopic virus is at present essentially a mental conception. But, as W. E. GYE has pointed out in his recent Lloyd Roberts Memorial Lecture,[2] the experimental evidence which has led to the formation of such a conception is exactly the same whether we are dealing with the filterable fowl tumours or foot-and-mouth disease, or, indeed, any other so-called virus disease. If we question the existence of a virus in one disease, we might equally well question it in all the others. The recent work on the various virus diseases, especially the brilliant work of LEVADITI and his collaborators, seems to indicate that the difference between virus diseases and bacterial diseases may be of a more fundamental nature than a mere difference in size of the infecting agent, and that the mechanism of virus infection may be different from that with which our study of bacterial infection has made us familiar. Instead of segregating the filterable neoplasms of the fowl from all virus diseases it would seem more reasonable to apply the conception of the mechanism of virus infection, as advanced by GYE for the fowl tumours, to other virus diseases.

A DIPHTHERIA FILM.

A STRIKING development in public health work is the decision by some life and sickness insurance companies, mainly American, that it is justifiable to use part of their funds in measures designed to improve public health. One British company, at least, is now in the habit of making a substantial donation each year out of its available surplus towards some promising line of medical research. Another company is paying attention to the possibilities of the cinematograph for public health propaganda, to which a lead has been given by Dr. D. M. Connan's well-known work in Bermondsey, and by the inclusion in the "Bibliography of Industrial Hygiene," issued at Geneva, of a list of cinema films dealing with the health of the community. A week or two ago a film entitled "Risk of Diphtheria banished" was shown by the Mutual Property Insurance Company at a gathering in London attended by medical officers of health and others. The film displays the record of a Boston family. During a violent wave of diphtheria three unprotected children suffered severe attacks, while one immunised sister remained completely well, though virulent diphtheria bacilli were found in her throat. Dr. Bela Schick is seen inoculating children, and the details of testing and immunisation are shown. The film on the whole was successful, though a boy with severe laryngeal paralysis would not often in English practice be allowed in the semi-upright position. Little objection could be taken to the general tone of the text, in which grave exaggeration is avoided. No suggestion is made at any stage of forcing compulsory immunisation on the public. The film, the whole cost of which was borne by the insurance companies concerned, will be loaned free of cost to medical officers of health and responsible health authorities for public exhibition.

[2] THE LANCET, 1926, ii., p. 989.

Annotations.

"Ne quid nimis."

THE PATHOLOGY OF EPIDEMIC ENCEPHALITIS.

IN spite of the vast amount of research done since 1919, when C. von Economo first described epidemic encephalitis, the problem of its causation has not yet been solved. The histopathology has been thoroughly studied by numerous observers, and the anatomical changes in the central nervous system have been fully described and recorded, but the causative agent has so far escaped identification, although new facts concerning its biology are noted from time to time. The distressing mental manifestations of chronic epidemic encephalitis have been regarded as post-encephalitic—that is, as the result of tissue damage caused previously by the infection, and not as the result of slow but active multiplication of the virus itself. W. Freeman,[1] who studied an epidemic in Washington, D.C., brings forward evidence to show that the causative agent persists long after the acute symptoms subside, and that the later manifestations of the disease are due to a true acute or chronic infective encephalitis. He quotes as a parallel the persistence of the spirochæte of syphilis in the central nervous system for many years before it reveals its presence by the onset of general paralysis or tabes. In the report on The Sheffield Outbreak of Epidemic Encephalitis in 1924,[2] recently annotated in THE LANCET,[3] the question of the relationship of the virus of herpes febrilis with that of encephalitis is again considered. In 1920, C. Levaditi and L. Harvier first recorded the successful transmission to the rabbit of a virus from a fatal case of encephalitis. This virus was carefully studied and found to be identical in all respects with the virus of herpes febrilis. Other observers reported, in all, six further transmissions to the rabbit, using brain or cerebro-spinal fluid from human cases of encephalitis, and these viruses were also shown to be immunologically and histologically similar to that of herpes. Levaditi therefore suggested that the causal agent of epidemic encephalitis was identical with that of febrile herpes, except that the virus of encephalitis had a greater affinity for the central nervous system than that of herpes. Doubt has been thrown on this view by several workers, because the few successful transmissions we have mentioned were the only ones recorded after very numerous attempts had been made to produce the disease experimentally. Furthermore, the virus of herpes is very easily transmitted to the rabbit by corneal or dermal scarification, or by intracerebral injection of herpes material, and it seems doubtful if these few successful experiments could justify the conclusion that the virus of herpes is the causative agent of encephalitis. Moreover, the isolation by S. Flexner of an identical virus from the cerebro-spinal fluid, taken from a case of neurosyphilis with no evidence of epidemic encephalitis, casts still further doubt on Levaditi's contention. In the recent outbreak in Sheffield, numerous attempts were made to transmit the virus of epidemic encephalitis to rabbits and mice from human material, and also to try to demonstrate the presence of its toxin. All these attempts were negative, and the production of experimental encephalitis was not accomplished. Parallel work done by J. R. Perdrau, and described in the index of the Report tends, however, to support Levaditi's contention. Perdrau found that the brains of immune animals in the fresh state did not neutralise the virus of herpes in vitro, but after being kept a week or two in 50 per cent. glycerine in saline,

[1] Freeman, Walter: Jour. Amer. Med. Assoc., Nov. 13th, 1926, p. 1601.
[2] Medical Research Council. Special Report Series No. 108. The Sheffield Outbreak of Epidemic Encephalitis in 1924. H.M. Stationery Office, 1926. 1s. 9d.
[3] THE LANCET, 1926, ii., 1123.

emulsions of these brains, instead of neutralising, actually had an activating effect on the virus, and reduced the time of incubation. The activating factor was compared to an aggressin. The period of incubation was also shortened if one or two intradermal inoculations of the glycerinated brain emulsion were given on the days immediately preceding that on which the intracerebral injection of virus was carried out. Perdrau, therefore, came to the conclusion that the failure to transmit encephalitis by a single intracerebral inoculation of human material was due to the presence of an inhibitory substance or antibody in the human cerebral tissue. A technique was devised which consisted of keeping the human brain material in 50 per cent. glycerine saline in the cold, and testing it on the rabbit at weekly intervals for four or five weeks. The rabbits were given intradermal, intracerebral, intradermal and intracerebral inoculations respectively on four successive days. It was found that as the brain material was kept it became more active, and three strains of virus, from as many fatal cases of encephalitis, were isolated. One of these strains proved, by cross-immunity and other tests, to be identical with herpes virus. The other two strains were less virulent and are regarded as similar, though this has not definitely been shown. On the basis of these results, Perdrau upholds Levaditi's view that the virus of epidemic encephalitis is identical with that of herpes febrilis. Owing to the small number of experiments, no definite conclusion can be reached, and confirmation from a much larger series of cases is necessary before Levaditi's contention can be regarded as proved. It is curious that the inhibitory substance or antibody should be present only in human brain material, because the brain of a rabbit dead of the disease is infective in extremely small amounts; doses as small as 0·001 c.cm. of a paper filtrate of a 20 per cent. brain emulsion, when inoculated intracerebrally, will usually prove fatal. Similarly, transmission by corneal scarification can easily be accomplished with an infinitesimal amount of herpes material.

ULTRA-VIOLET RAYS AND VACCINE THERAPY.

THE discovery of vitamin D, the proof of the anti-rachitic value of ultra-violet rays from any source, and the experimental photosynthesis of the anti-rachitic factor in cholesterol or closely associated substances, have set many theorists explaining the probable mechansim of the body's reaction to ultra-violet rays. Dr. Paolo Iacchia, writing in *The Pediatria-Archivio*, essays to explain the mass of established facts of actinotherapy, and seeks a rational basis for a special line of treatment that has given hopeful results in his hands. Dr. Iacchia believes that the effect of ultra-violet rays is to be explained in an increased ionisation of the electrolytes dissolved in, or loosely combined with, the blood plasma. He counters the criticism that very little ultra-violet light penetrates the skin by pointing out that microtome sections of skin are not comparable with the living skin and that the thickness and cornification of the skin varies in different sites and every individual. He attributes the quicker reaction of children to the ultra-violet rays to the relative thinness and softness of their skin allowing a greater intensity of the incident radiation to reach the cutis vera. The liberation of Ca and P-ions in the plasma would, according to Dr. Iacchia, explain the beneficial effects of the rays in rickets, and would be in keeping with the work of Bonino, who finds that these elements are more easily dissociated in human than in cows' milk. Such theorising does not carry us very far, and the interest of the paper to medical men lies in a description of a method of treatment termed by the author "auto-batterio-proteino-terapia," which consists in the subcutaneous injection of pus, or other infective material, rendered sterile by irradiation with a mercury-vapour lamp. In addition to pus from wounds, carbuncles, and the like Dr. Iacchia has used sputum from cases of tuberculosis, pneumonia, &c., and infected urine from cases of pyelitis and cystitis. Ordinary pus is emulsified with distilled water, exposed to ultra-violet rays for an adequate time and then injected; sputum is dried on a glass slide as a thin film, irradiated, scraped off, and emulsified as for pus; urine is centrifuged and the débris washed several times to free it from soluble salts before injection. No control of the number of organisms is considered necessary, and, apparently, no severe reactions have followed this form of treatment in Dr. Iacchia's hands. He publishes many illustrative cases and declares that, after 20 years of general practice, he is satisfied that this treatment is far better than any recognised form of vaccine or foreign protein-therapy. The results claimed may encourage further work on autogenous vaccines sterilised by ultra-violet rays.

THE SYNTHALIN TREATMENT OF DIABETES MELLITUS.

As a result of their work on the chemistry of guanidin, E. Frank and Heyn prepared a series of alkyl derivatives with a long CH_2 chain, and later, in conjunction with M. Nothmann and Wagner, found that the derivative known as synthalin has an action similar to that of insulin when given to rabbits and dogs with pancreatic diabetes. Some account of the results of treating human diabetics with this derivative has already appeared in THE LANCET,[1] and further details have how been published in the *Deutsche Medizinische Wochenschrift* for Dec. 3rd and 10th. Frank and Heyn found that synthalin is 100 times as effective as guanidin and that the administration of 3 mg. per kg. body-weight causes in a fasting rabbit hypoglycæmic symptoms which are immediately relieved by glucose. In synthalin the toxic effects which guanidin produces have been so far diminished that no hyperexcitability of the nervous system is noted, and when the drug is administered to man it is necessary to guard against the tendency to vomiting, lethargy, and anorexia which is a feature of guanidin poisoning in cats. It was found that a dose of 4 mg. per kg. of body-weight was fatal to dogs of 6 kg. within three or four days, but if the same dose was spread over a period of two days and then given again after an interval of one or two days the drug was well tolerated. In describing the results of treating human subjects Frank and Heyn point out that although formerly synthalin was given one hour before meals, it was afterwards found better to administer the dose in fluid at the beginning of a meal. It is taken by mouth and the usual single dose is from 20 to 25 mg., the largest quantity which they gave being 125 to 150 mg. over a period of four days. They tried to reduce a sugar excretion of 40 to 50 g. to a few grammes, and started with doses of 20 mg., increasing to 25 mg. when necessary; but they found that when a certain total has been reached a pause of 24 to 36 hours is necessary, as synthalin, though acting more slowly than insulin, has a greater cumulative effect and may cause gastric symptoms. If, however, the urine-sugar tends to rise during the 36-hour interval, an injection of insulin may be given or bread may be omitted from the morning and evening meals. Cases in which the disease is slight may be controlled by small doses at longer intervals. It is possible to transfer patients on insulin to synthalin treatment suddenly if the normal sugar excretion is known, but in severe cases it is advisable to make the change gradually. Excessive doses of the drug cause loss of appetite, epigastric oppression, vague pains and at times diarrhœa, and in the worst cases malaise, nausea, and vomiting. In the course of seven months Frank and Heyn have noticed no cumulative or slowly developing harmful effects, but they point out that there are cases where the treatment cannot be used, and they found that 2 or 3 per cent. of their own patients came into this category. The maximal effect may not be seen for a short time, during which there may be a gradually increasing

[1] THE LANCET, 1926, ii., 1288.

tolerance, and it was found that the dose could be reduced or the carbohydrate intake increased without ill-effect. Acetonuria and acidosis diminish as sugar begins to disappear from the urine, and a case is described in which, after doses of over 75 mg. had been given, the acidosis was much lessened at the end of the second day, although it was necessary to starve the patient because of vomiting. Synthalin was found to be of no greater value than insulin for diabetic gangrene, and insulin treatment is considered advisable where an operation is necessary; a gradual change to synthalin can be made afterwards. On the other hand, some patients intolerant to insulin have been treated successfully with synthalin, and in certain cases in which a sugar-excretion of 100 g. fell only to 50 to 60 g. under the influence of insulin, the glycosuria was almost abolished by synthalin. The fact that the action of this drug is not so rapid as that of insulin is sometimes advantageous, and in cases where large injections of insulin are impracticable synthalin is preferable both from the point of view of cost and simplicity. On the other hand, Frank and Heyn point out that synthalin is unsatisfactory for the treatment of coma, as it works too slowly and toxic doses must be given in order to prevent a collapse of carbohydrate metabolism. The drug, they say, is still a long way from being ideal, as it does not allow of the patient having a diet sufficiently generous as to be satisfying. From the account given it is impossible to be at all sure that synthalin is of a similar constitution to insulin, and it seems that the new drug can only be of use in certain selected cases.

TROPICAL TYPHUS.

DURING the late war epidemic typhus occurred on an appalling scale in parts of Europe and Asia. It is a disease which follows in the track of famine and destruction, and it is so contagious that in the days of Murchison few or none of the staff of fever hospitals escaped infection, whilst Osler records that during a period of 25 years in Ireland it caused the death of nearly half the 1200 medical men attached to institutions. Typhus rarely occurs, however, in countries where the climate is hot all the year round, and so is little known to medical men in the tropics. The more interest, therefore, attaches to careful observations [1] recently made by Dr. William Fletcher and Dr. J. E. Lesslar, who have recognised in the Malay States a continued fever with exanthem, which they have named Tropical Typhus, and which, they believe, extends far beyond the limits of the Malay Peninsula. Tropical typhus, as they describe it, differs essentially from the great epidemic disease; the symptoms are the same, and there is a positive Weil-Felix reaction in both, but the epidemiological features are entirely different. It has a very low infectivity and mortality; patients may remain at home without infecting their families, and it is unusual for more than one person in the same household to have the disease. Fletcher and Lesslar have noted many records of outbreaks of mild, non-contagious typhus in different parts of the world where epidemic typhus does not occur—notably Brill's disease (1898) in New York, where it is rarely fatal and never contagious. A similar type of mild non-contagious typhus has been described by Yersin (1906) and Vassal (1908) in Indo-China; Smithson (1910) in Queensland; Conor and Bruch (1910) in Tunis; MacNaught (1911) in South Africa; McKechnie (1913) and Megaw (1921) in Kumaon district of Himalayas; Maxy and Havers (1922) in Alabama; Hone (1923) in Adelaide; Sinclair and Maxy (1925) in Rio Grande Valley; Clearkin (1925) and Anderson (1925) in East Africa and Nairobi; and Megaw, Shettle, and Roy (1925) in Central India. In none of these outbreaks could careful observation implicate lice as the vectors; in some of them a tick appears to have been possibly to blame. They have been grouped together among the typhus fevers by Megaw, but he separates them from the far more severe group of louse-typhus (*exanthematicus*), tick-typhus (Rocky Mountain fever), and mite-typhus (tsutsugamushi). The first and milder group comprises Fletcher and Lesslar's tropical typhus—one disease under many names in many countries. In the Malay cases lice could not have been the vectors; infection with the virus was connected in some way with open uncultivated grazing land; and no lesions, such as those caused by mites in tsutsugamushi, could be detected in the skin of either European or Asiatic patients. It appears probable that in Malayan typhus the vector is a tick, and Fletcher and Lesslar appeal for the help of entomologists in solving the riddle of the ætiology of tropical typhus.

During the late war Weil and Felix (1915) cultivated from the urine of a typhus patient, in Constantinople, an organism of the *proteus* group which was agglutinated by the man's own blood, and also by the blood of other persons suffering from typhus. They employed this organism in diagnosis, and called it X 2. Later they found that a similar bacillus, X 19, was agglutinated in higher dilutions than X 2. This strain, X 19, is that now employed in the Weil-Felix reaction, which is regarded by all competent authorities as a specific test for typhus fever. Fletcher and Lesslar stress the importance of this reaction in the diagnosis of tropical typhus. In some of the outbreaks of mild non-contagious typhus, noted above, this reaction was reported as positive; in others it was negative. In the Malayan cases it was always positive. They considered these contradictory results as probably due to the use of different strain of *B. proteus* in different parts of the world, and accordingly they obtained strains from colleagues in India, Sumatra, and England for cultivation and comparison. In fact, the records of the culture characters of the *B. proteus* strains used by the several workers do not tally, and show plainly that the respective strains could not be each the same X 19. Their investigation [2] shows that the diversity of strains which pass under the name of *B. proteus* X19 makes it imperative to carry out careful control tests when working with an unknown culture. It is unjustifiable to conclude that a patient is not suffering from typhus because his blood fails to agglutinate an unproven culture. If the Weil-Felix reaction be positive, the result can easily be checked by the testing of healthy controls. A serum dilution of 1-200 is the limit, they consider, above which agglutination gives positive evidence of typhus. They record the important observation that there were two serum-groups of Malayan cases: one group gave positive agglutination only with the anindologenic (Kingsbury) strain of X 19, and the other group gave positive agglutination only with the indologenic strain of X 19 from the National Collection. The two groups appear to be equally common, and show hardly any difference in course and symptoms. Neither group is contagious nor spread by lice. Attempts to infect guinea-pigs failed, probably because the blood of the patients was not obtained at any early stage. Dr. Andrew Balfour had drawn their attention to the report of F. T. Wheatland [3] on an outbreak of non-contagious typhus-like fever at Toowoomba, Queensland. This disease very closely resembled Malayan tropical typhus in its 12 or 14 days' fever, severe headache, macular rash (like that of typhoid, but more profuse), defervescence by quick lysis or crisis, and mortality of 2 per cent. It was not carried by lice, and the Weil-Felix reaction was invariably positive. There had been a plague of mice on the farms in the Toowoomba district, and when the human disease appeared these rodents were dying in great numbers. The farmers linked these phenomena, and called the illness mouse-

[1] Tropical Typhus: Bulletins from the Institute for Medical Research, Kuala Lumpur, Federated Malay States, No. 2, 1925.

[2] William Fletcher and J. E. Lesslar: The Weil-Felix Reaction in Sporadic Typhus, Bulletins from the Institute for Medical Research, Kuala Lumpur, F.M.S., No. 1, 1926.

[3] Medical Journal of Australia, March 6th, 1926.

disease. This typhus-like fever was confined almost entirely to those who lived on mouse-ridden farms, or dealt with mouse-infested grain. Wheatland concluded that it was probably transmitted by some ectoparasite of the mouse. Fletcher and Lesslar's original observations on non-contagious typhus, and their careful review of the literature, will now, it is hoped, meet with the reward such thorough work deserves—a sharper look-out in the tropics for continued fever with exanthem (the rash, they note, is very easily missed in dark skins), and a quickened interest in its ætiology.

MENTAL HYGIENE AND MIGRATION.

THE United States of America are unique in the enormous number of foreigners who desire to enter the country; during the first 22 years of this century the tale of immigrants was nearly 18,000,000. Thus the Government has to face in an acute form the economic fact that the more the newcomers to any community the greater the number who will become a charge on the public treasury. The department most interested in immigration is, naturally, the Public Health Service, for it has to bear the burden not only of caring for those immigrants who, unable to adapt themselves to their new environment, become mentally or physically ill, but also of many of the evil results of their presence among the existing population. Since 1891 it has been required by law to examine the physical and mental condition of arriving aliens, and its opinions carry great weight in shaping the policy of the Federal Government. In 1922 the Service began an exhaustive research into the relationship between the migration of peoples and mental health, and the results of their preliminary inquiries are set out in a pamphlet by Dr. Walter L. Treadway,[1] who has had many years' practical experience as a psychiatrist.

In order to study foreign immigration from the standpoint of mental health, Dr. Treadway fully realises that it is necessary to know the methods adopted by communities to relieve distress. These methods, though they evolve with time, are always deeply rooted in tradition and custom. He therefore traces the history of public relief from its beginnings in mediæval England and Europe, through its development in the early American settlements, to its present-day forms in the States. In successive chapters he outlines the growth of workhouses, prisons, and reformatories, and the evolution of institutions for the care of the insane and the mentally deficient, and discusses the early treatment and prevention of mental disorder. In "Glimpses of European Ethnogeny" he surveys the exceedingly complex history of migrations in Europe, with the consequent intermingling of language, folk-lore, and customs, and describes Dr. D. G. Brinton's classification of races, on which is based that adopted by the Immigration Service in 1907. After this comes a detailed survey of immigration during the last ten decades and of the evolution of immigration laws. In considering the psychopathology of racial groups he agrees with Kirby that the Celtic stocks are more prone than any other to develop intoxication psychoses, the Irish ranking first in alcoholic disorders. The Malayic stock seem more liable to develop traumatic conditions, sharing with the Anglo-Americans the unenviable distinction of being more likely to be sent to mental hospitals when not actually insane than any other racial groups. Syphilitic brain disease is least of all in the Anglo-American, while ranking high among Indio-Eranic, Sinitic, Negritic, Lettic, Finnic, and Chaldaic stocks. The Teutons and Celts seem to specialise in mental disorders due to senile and cerebral arterial changes, while Tartaric and Hellenic peoples head the list for disorders associated with faulty mental adjustment. Mental disease, when it occurs, is most often benign among Malayic, Anglo-American, Chaldaic, and Sinitic immigrants, and the Anglo-American, Tartaric, and American-Indian rank highest for those disorders due to abnormal personal make-up. Mexican, Irish, and German are the three races most often debarred for mental disorder at the immigrant examination.

The difficulties are great of forming an adequate psychiatric opinion on the scanty data afforded by a ship surgeon's report and an interview with the alien who is asserting his right to enter the country, supported by his friends and relations. These difficulties are the burden of the last three chapters of the report. The onus of proof is thrown on the doctor, but he is aided by the enormous mental stress involved in the examination on which the immigrant's fate hangs. The under-average and unstable generally arouse suspicion in the preliminary inquiry, and are put back for further test. Few are ever certified without three complete examinations, and any alien debarred by a board of special inquiry has the right of appeal. A formidable machine, largely sentimental in its origin, is set in motion to stay deportation and land the excludable alien, and subterfuges are often employed. Mentally disabled aliens may land on filing a bond providing against their becoming public charges, and the war period produced a large crop of temporary landings that have become permanent. As Dr. Treadway says, a method has yet to be devised whereby the doubtful mentally disordered immigrant or the potential "misfit" will be prevented from entering America. The need for it is shown by the high proportion of mental disease among foreign-born persons living in the United States. Transport companies could obtain sufficient data to enable them to refuse passage to such aliens as are most likely to become public charges or to be sent back at the expense of the company which brought them. The Immigration Act of 1924, with its penalties for the introduction of aliens suffering from frank disease, affords a starting-point. Dr. Treadway points out that the cost of an adequate examination service would not amount to the expense the companies now incur in caring for detained and deported aliens. He recommends that legislation should include a clause binding the companies to support all aliens who become a charge on the public within five years of their landing, including repatriation and the provision of an attendant when necessary. Such an Act should certainly deter shipping companies from transporting aliens whose mental stability is reasonably in doubt.

[1] U.S. Public Health Dept., P.H. Bulletin, No. 148, Mental Hygiene with Special Reference to the Migration of People. Government Printing Office, Washington, D.C. 25 cents.

CHEMISTRY OF CARDIAC CONTRACTION.

AN extract of the right auricle of the dog's heart exerts a stimulating effect on the isolated heart muscle of the rabbit, increasing the amplitude of the muscular contractions, accelerating the rhythm, and even initiating contraction in muscle in a condition of standstill. This was shown by J. Demoor in 1923.[1] More recently [2] the same investigator has made alcoholic extracts of different parts of the heart of the rabbit and tested their relative capabilities in stimulating to increased mechanical response the isolated auricles of the same species. Extracts of the sino-auricular nodal tissue, of the right auricular muscle, and of the left auricular muscle, were investigated in this manner. The isolated right auricle of the rabbit beats rhythmically in a bath of oxygenated Locke's solution, and it was found that the addition of the extract of nodal tissue, and to a smaller extent that of right auricular muscle, exerted definitely positive inotropic and chronotropic influences on the auricular beats. An extract of left auricular muscle was without action. The isolated left auricle of the rabbit shows infrequent irregular contractions when placed in oxygenated Locke's fluid, and it was found that the nodal tissue extract acted specifically on this tissue, converting the spasmodic irregular responses into those of apparently normal rhythmic

[1] Comptes Rend. Soc. de Biol., lxxxviii., 631.
[2] Ibid., xci., 90; xciii., 814 and 1239.

activity. Prof. L. Haberlandt, in a series of five papers in the *Zeitschrift für Biologie* and *Pflüger's Archiv*, has recorded his independent observations on similar experimental lines in the case of the frog. We have already drawn attention to this work,[2] and it will be remembered that Ringer's fluid in which the sinus tissue has been beating for some time becomes activated in the sense that the fluid will cause an increased amplitude of contraction and an increased rate of contraction when brought into contact with the frog's isolated ventricle perfused by Straub's method. The fluid was inactive in those cases in which the contractions of the sinus tissue were feeble or entirely absent. Further, contracting auricular tissue was impotent to activate the fluid in which it was contracting, as was also the rhythmically stimulated tip of the ventricle. The production of metabolites, therefore, could not be invoked as the cause of the phenomenon. Furthermore, the active substance is produced by the sinus after the addition of ergotamine to the bath, and this fact makes the supposition that the effect observed might be due to the liberation of Loewi's "accelerating substance" improbable. Positive results were also obtained in the case of the contracting ventricular base, so that the production of this substance seems to be intimately connected with the presence of Purkinje tissue. Haberlandt has made some observations on the chemical nature of this "automatic stuff"; he finds it to be soluble in alcohol, dialysable, and insoluble in ether. He has obtained positive results in about 66 per cent. of the experiments in which the "sinus-basis Ringer" was used and in about 50 per cent. of those experiments in which alcoholic extracts of the nodal tissue were employed. This fact, taken into consideration along with the independent observations of Demoor on the mammalian heart referred to above, makes it desirable that further work should be done along the same lines. Worthy of special study would be the comparative effects of alcoholic extracts of various parts of the cardiac musculature on the rate and on the diastolic volume of the isolated mammalian heart beating under rigidly controlled conditions.

THE M.O.H. AND HIS AUTHORITY.

THE medical practitioner is concerned in local government not only as a ratepayer but on account of the steady encroachment of municipal operations upon the field of his own activities. It is therefore worth his while to take every opportunity of examining how the work of these bodies is done, and in Mr. E. D. Simon's book[4] he will find it clearly and frankly stated. Mr. Simon, having been Lord Mayor of Manchester and a Member of the House of Commons, writes with authority on the management of public affairs and, breathing as he does the spirit of divine discontent, his account of a council's work is anything but dry. It must not be assumed that his dissatisfaction leads to wholesale condemnation of local government; on the contrary, the council receives his blessing for the quality of work it manages to do, hampered by legislative restrictions, party strife, trade interests, and confusion of tutored and untutored counsel. He points to weaknesses in administrative organisation, lack of coördination between committees (which really means between the departments of a corporation) and the absence of any official or group of councillors whose main function would be to foster and ensure the beautification of a city and the enlightenment of its people. He compares our local government service with the civil service and with the German system to the disadvantage of the former—perhaps because his knowledge of the others is less intimate. His experience as chairman of the Housing Committee lends special importance to the chapter on house-building by local authorities. Of the many debatable points raised in this provocative book we join issue with Mr. Simon on his contention that a medical man is usually a bad administrative officer and that, in order that a medical officer of health may escape becoming too rusty on the medical side to supervise the medical work of his own department, he ought to be subordinated to a lay administrator of the best civil service type. We see his point and sympathise with his objects, but the disadvantages of the method he suggests would outweigh the advantages. On the whole, Mr. Simon seems a little touched with the doctrine of the superman and also inclined to think that when difficulties exist any change would be an improvement. His book will therefore appeal especially to the young, which is all in its favour. But everybody interested in local government should read it.

[2] THE LANCET, 1926, ii., 973.

[4] A City Council from Within. By E. D. Simon, M.A., M.I.C.E., M.I.M.E., ex-Lord Mayor of Manchester. London: Longmans, Green and Co., Ltd. 1926. Pp. 246. 7s. 6d.

INJURY TO THE SKIN.

A RECENT issue of *Heart*[1] contains five original papers bearing on the mechanism by which the skin reacts to stimuli. The first of these summarises the work of Sir Thomas Lewis and R. T. Grant on the reaction of cutaneous capillaries to the injection of histamine, and goes on to show that if the skin be so injured that œdema or erythema are produced, its vessels become refractory—for a time at least—to similar or allied stimuli, which in control areas will still produce definite and specific vascular effects. Good grounds are given for postulating a mechanism of cutaneous defence in which the local liberation of histamine, or some similar substance, plays a vital part. Lewis and Grant regard the refractory stage thus induced as a phenomenon of the cutaneous vessels rather than as an attribute of the epidermal cell; it cannot, therefore, be compared with the mechanism of muscle-cell fatigue. In the same article Lewis also reports on his study of the actions of heat, cold, ultra-violet rays, adrenalin, and pituitrin, on areas which have previously been rendered refractory by histamine. He found that none of these agents altered the so-called histamine flush until the refractory stage had passed off. Applying the available facts to the study of pathological conditions such as the reticular configuration of erythema ab igne on the shins and the production of telangiectases from old X ray burns, he claims that these vascular abnormalities originate in a prolonged phase of "refractoriness of vascular tissue." In the succeeding article Lewis and Y. Zotterman, of Stockholm, record their observations on a case of annular œdema secondary to infective endocarditis and explain the configuration of the eruption on the same basis. A nodule arising round a presumed embolic focus was seen to spread concentrically outwards, and as it spread the centre of the raised circular erythematous patch would clear, thus giving rise to an annular figure. In this involuted central area the refractoriness, induced by the virus and giving rise to the phenomenon of flushing and œdema might be considered to have passed away; but it was still present at the periphery and would remain there until the ring ceased to enlarge—i.e., until the virus had been completely diluted or neutralised. This interesting conception is supported by the behaviour of two advancing refractory rings when they meet. It was seen—and it is, of course, a recognised fact—that these rings never pass through each other; the advance of both peripheries is suddenly checked and a variety of gyrate and polycyclic figures result. The substance of this new and important conception can be summarised in the authors' own words: "All forms of acute or relatively acute local œdema of the skin are due to injury of that skin, the injury leading to a reaction of the cells of the skin, whereby histamine-like substances are liberated. To these substances the vascular reaction, vasodilatation and increased permeability are directly due." The same workers are responsible for the third article in this series, which is devoted to the mechanism of the skin reaction to ultra-violet rays and leads to the same

[1] Heart, vol. xii., Nos. 2 and 3.

conclusion—namely, that histamine-like bodies are liberated locally. The latency of reaction in this type of cutaneous stimulation is explained by the assumption that whereas in freezing, burning, or "stroking" (in a case of urticaria factitia) the cells are suddenly stimulated or damaged, the effects of ultra-violet irradiation are gradual and continuous and the liberation of histamine-like bodies is probably slow and continuous likewise. In the fourth article Lewis and Grant discuss the anaphylactic skin reaction and succeed in shedding new light upon some of its features. Their experiments were all carried out on a subject susceptible to fish (herring) who was found to be 170 times more suceptible to extract of fish than to histamine (1 in 3000), to which his response appeared to be normal. From 6 lb. of herring a substance resembling nucleic acid was eventually isolated, and with this substance the same anaphylactic phenomena could be obtained. It is suggested as a result of this investigation that "the anaphylactic poison acts on the skin by liberating in it a histamine-like substance." The final article in the series is by Ronald Hare, and is an independent investigation on the same lines as the others above, of the vascular reactions of the susceptible skin to protein. Working in the inoculation department of St. Mary's Hospital, London, Hare compared the reaction to histamine and to specific proteins in two subjects susceptible to horse-serum and one susceptible to pollen. The work seems to have been carefully done; his conclusions confirm the work of Lewis and his colleagues and go to show that a specific protein in a susceptible subject induces the production of histamine-like bodies to which the observed phenomena—local capillary dilatation, increased permeability, and reflex dilatation of neighbouring arterioles—are due. These five papers, as will be obvious, contain information and opinions of great interest both to the dermatologist and the physician.

SMALL-POX IN THE NORTH.

THERE is no abatement in the epidemic of mild small-pox in the North of England, the number of cases notified from the county of Durham during the last few weeks averaging about 250, 27 different sanitary districts being involved.

At the request of the chairman of the North-East Durham Joint Hospital Board and of medical officers of isolation hospitals in that board's area, a conference was called last week by Dr. T. Eustace Hill at the Shire Hall, Durham, to consider the epidemic and the best means for dealing with it. It was agreed that the existing accommodation for small-pox in the county of Durham is utterly inadequate to deal effectively with the present epidemic, and that so long as a large proportion of the county is unprotected by vaccination it was almost impossible to control the spread of the disease, owing to the mildness of the cases, which resulted in medical advice not being sought early, the occasional non-recognition of the disease by the practitioner, and the indifference of the community to its spread. Neglect of vaccination, it was pointed out, was incurring an enormous expense on the county, the treatment and isolation of cases costing the local authorities alone well over £1000 a week, and the interference with trade was serious. The following resolutions were adopted:—

That, in the opinion of this conference, the present epidemic of small-pox would not have occurred if the stringency of the Vaccination Acts had not been weakened, and that prompt vaccination or revaccination of susceptible persons is of the utmost importance if the present epidemic of small-pox is to be brought under early control; and that if such vaccination or revaccination was secured, small-pox in the county would be stamped out within three months.

That, in the opinion of this conference, hospital authorities of districts where the available accommodation is inadequate for the prompt isolation of all cases of small-pox, should utilise, as a temporary measure, their ordinary isolation hospitals for the treatment of small-pox, where such hospitals are suitably situated for the purpose, and make arrangements with adjoining sanitary authorities for the treatment of their ordinary infectious cases in the adjoining hospitals a pooling arrangement being instituted both as regards the isolation of cases of small-pox and cases of ordinary infectious diseases.

That if in any district there is available accommodation for small-pox cases in convenient empty buildings, arrangements should be promptly made for the use of these buildings for the isolation of small-pox cases; and that local hospital authorities should also consider the advisability of at once erecting temporary hospital accommodation to enable them promptly to isolate all cases occurring.

That the medical officer of health for each sanitary district should communicate with every medical practitioner in his district, calling his attention to the urgent importance of keeping a careful look-out for all suspicious cases of rash and of at once acquainting the medical officer of health of such cases, and that a copy of the monograph of Dr. McConnel Wanklyn, entitled "The Accurate Diagnosis of Small-pox," should be issued by the medical officer of health of each sanitary district to every medical practitioner practising in that district.

The conference concluded by urging upon the Ministry of Health the importance of amending the Vaccination Acts with the object of making vaccination more general and efficient, as vaccination affords the quickest, most scientific, and most economic means of preventing and arresting outbreaks of small-pox.

CIRCUMCISION AND CARCINOMA.

UNIVERSAL circumcision has many advocates, but they seldom make use of a rather impressive line of argument which has lately been put forward by Dr. A. L. Wolbarst, of New York. Dr. Wolbarst thinks it probable that removal of the foreskin of all infant boys would prevent at least 2 per cent. of cancer in the male, and brings authoritative statements and interesting figures to support his reasoning. "All writers on penile cancer are agreed," he says, "that phimosis constitutes the predominant ætiologic factor in the production of penile cancer." It not only provides the soil from which the growth may spring, but also furnishes and retains the irritating secretions which may call it into being. Although he recognises that urethral discharges, syphilitic lesions, polypoid vegetations, ulcers, and trauma may be the starting-point of malignant disease, he regards phimosis as mainly to blame for 85 per cent. of cases of cancer of the penis. Practically all male children, he points out, are born with a phimosis, and the condition often persists throughout life. Everyone knows that even where the foreskin is easily retracted, it is hard to prevent accumulation of urine and smegma, which may set up chronic irritation, and Dr. Wolbarst is unimpressed with the suggestion that carcinoma never develops where the foreskin is freely movable, since benign precancerous lesions occur on the foreskin whether it is retractible or not. The risk of developing penile cancer is by no means inconsiderable. Although uncommon compared with some other varieties of carcinoma it nevertheless comes second in frequency, according to Dr. Wolbarst, amongst cutaneous cancers, and is generally said to account for between 2 and 3 per cent. of all malignant tumours in the male. Although its prevalence has been estimated by some observers at only 1 per cent., he states that the consensus of opinion, as represented by the most recent literature, is that 2 per cent. is not too high an assessment. If it could be shown that universal circumcision would remove this cause of death and disability there would be an excellent case for adopting it as a prophylactic measure; for although it is conceivable that local irritation does nothing more than determine the *site* of an inevitable cancer, it is reasonable in the light of present knowledge to make such local irritation as infrequent as possible. As circumcision is practised by large communities it should be easy to ascertain whether it does prove a complete safeguard against penile cancer. Unfortunately, it is not very easy to collect figures from the official mortality statistics in this country because they give no particulars about religious belief; but Dr. Wolbarst says that "students of cancer are agreed that penis cancer rarely if ever has been recorded among

Mohammedans and Jews, who practise circumcision in early life as a ritual measure." Among 3,000,000 Jews in the United States cases of penile cancer should be encountered from time to time if the 2 per cent. rate of incidence holds good, yet although other forms of cancer are at least as common in Jews as in Gentiles, he says that the records of Jewish hospitals do not seem to mention cancer of the penis except as occurring in their non-Jewish patients. Thus in two Jewish hospitals in New York not a single case of this disease is recorded amongst 958 consecutive cases of male cancer. If Dr. Wolbarst is right in his conclusion as to the comparative freedom of the circumcised, his argument for universal circumcision is a strong one. If, on the other hand, he is misinformed about the rarity of penile cancer in Jews and Mohammedans it should be easy to prove him in error. It is to be hoped, therefore, that practitioners will place on record any cases in which they have seen the condition in Jews or Gentiles circumcised in infancy.

THE ROCKEFELLER FOUNDATION.

A BALD statement of the activities of the Rockefeller Foundation during the year 1925, for which the report has just been issued,[1] would consist of a long catalogue classified in just over 20 sections. This in itself would not be without interest and certain items demand special notice, but what is perhaps more instructive is to observe the trend of policy of this organisation as indicated in the president's review. Mr. George E. Vincent points out that the increase in the number and resources of privately endowed foundations—notably, but not exclusively, in the United States of America—raises pertinent questions as to the place of these agencies in the social order and their relation to the work of governments. It is stated elsewhere in the report that 631 formal applications for aid had to be refused during the year 1925. "The types of assistance requested did not fall within the scope of its (the Foundation's) activities as determined by its present politics," for "the Foundation does not make gifts or loans to individuals, nor contribute to the building or maintenance of churches, hospitals (except as certain hospital features may be included in plans for medical education), and other local institutions, nor support campaigns to influence public opinion on social or political questions." The positive side to such negative statements of policy is furnished by the catalogue already mentioned, some of the details of which may now be chosen for comment. In the field of public health, where the private funds come into relation with the tasks of governments, the Foundation has adopted the policy of working only with and through governments. Its International Health Board will lend a hand only on the invitation of an official agency, and it is kept constantly in the foreground that the task of protecting a community against disease must be accepted by a government as its own primary responsibility. On these lines in 1925 official anti-hookworm measures involving the treatment of nearly 1½ million people were carried out and yellow fever has been practically eradicated from the Americas. With regard to its interest in medical education the Foundation's policy is based on the fact that the backbone of any public health measure is formed by the medical profession, and hence the necessity of emphasising the "preventive idea" even in undergraduate days. The dangers attached to this are, of course, realised, and in particular it is pointed out that if a curriculum is to be permeated with this "preventive idea," there must exist "a curriculum of the right sort to be permeated." Hence the support shown by the Foundation to medical schools in many lands, and the expenditure of approximately three million dollars in 1925 on this item alone. Realising that "medicine, both curative and preventive, whether it be considered as science or art, quite obviously depends directly on psychology, biology, chemistry, and physics," the Foundation is supporting certain activities in connexion with mental hygiene and psychology, and is showing an interest in biology. Here a special form of aid calls for separate notice, for the Foundation has granted 350,000 dollars to be spent over a ten-year period in support of the production of "a world memory for biology" which is the president's way of describing a huge abstracting enterprise to cover the estimated 40,000 articles dealing with biology in 5000 different journals each year. In other fields the activity of the Foundation continues to show progress. In China the Peking Union Medical College carried on as usual in 1925 despite the local distractions and the policy of transforming "the College gradually into a Chinese medical centre with a Chinese staff and ultimately a Chinese board of trustees in complete control" is being carried out effectively. The nurse is also observed with interest by the Foundation, and the president's review contains a good summary of the difficulties now presenting themselves in the nursing profession where the attractions offered in the public health field are said, in America at any rate, to be luring the nurse from the smaller hospitals and from private work. The Foundation stands aside in the controversy, devoting itself to the training of leaders in the nursing profession in different parts of the world. This point alone could be expanded to demonstrate the policy of the Foundation in most of its work, but sufficient has been said to indicate how it is moving. Its watchwords, in the language of its president, are "coöperation not rivalry, response not propaganda, economy not speculation, temporary aid not continued subsidy, official responsibility not usurpation of authority, a permanent gain not an ephemeral exploit."

[1] The Rockefeller Foundation Annual Report, 1925. New York: The Rockefeller Foundation.

The Services.

ROYAL ARMY MEDICAL CORPS.

Maj. W. J. E. Bell and Capt. T. H. Twigg, are secd. for service under the Colonial Office.

Capts. G. F. Carr and B. H. C. Lea-Wilson (Prov. and remains secd.) to be Majs.

Capt. P. L. C. Carrier retires, receiving a gratuity.

REGULAR ARMY RESERVE OF OFFICERS.

The undermentioned Cols. having attained the age limit of liability to recall, cease to belong to the Res. of Off.: C. K. Morgan, late R.A.M.C. and Hon. Brig.-Gen. C. G. W. Hunter.

TERRITORIAL ARMY.

Maj. O. H. Mavor (late R.A.M.C., T.A.) to be Maj., supern. for service with Med. Unit, Glasgow Univ., Sen. Div., O.T.C.

Lt. H. W. M. Williams resigns his commn.

Lt. J. R. Wheeler (late R.F.A., Spec. Res.) to be Lt., supern. for service with Med. Unit, Belfast Univ., Sen. Div., O.T.C.

J. H. Strahan to be Lt., supern. for service with Med. Unit, Belfast Univ., Sen. Div., O.T.C.

INDIAN MEDICAL SERVICES.

Lt.-Col. R. F. Baird officiates as Inspector-General of Civil Hospitals, United Provinces. Lt.-Col. H. H. Broome, Principal, King Edward's Medical College, Lahore, to be a Member of the Governing Body of the Punjab State Medical Faculty, vice Khan Bahadur Syed Nazirhussain, resigned.

DEATH IN THE SERVICES.

Deputy Inspector-General Henry Manton Murray Sedgwick, R.N., died at Southsea on Dec. 23rd, aged 86. He entered the Royal Naval Service as assistant surgeon in 1863, and saw foreign service on the East Indies station. During the Abyssinian war he was medical officer of the Naval Brigade (mentioned in dispatches, promoted to surgeon, and received the Abyssinian Medal.) In 1882 he was fleet surgeon in H.M.S. *Inflexible*, at the bombardment of Alexandria. (Alexandria clasp, the Khedive bronze star, and the Order of the Medjidieh.) He retired in 1892.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

CCIV.—TREATMENT OF PATIENTS WITH HIGH BLOOD PRESSURE.

THERE is more than a verbal difference between the treatment of high blood pressure itself and of patients with a raised blood pressure. High blood pressure has become a fashionable ailment, sometimes even an obsession, among the public, so that some people go about constantly speaking and, therefore, probably thinking continually of their "blood pressure," and ascribing to its evil influence symptoms really due to other factors. Further, the mental worry induced by knowledge of the possible results of hyperpiesia raises their blood pressure, and hence a vicious circle results, which demands treatment of the patient by sensible optimistic encouragement and bromides. High blood pressure is a manifestation of some underlying disorder—metabolic, renal, dietetic, toxæmic, infective, or psychological—and, though it may be reasonably regarded as responsible for subsequent arterio-sclerosis, renal fibrosis, and cardiac failure, many, if not most, of the symptoms found in persons with abnormally raised blood pressure, and in common usage regarded as due to it, can be better explained as either concomitant effects of the underlying cause or of the resulting or complicating arterio-sclerosis, renal or cardiac disease (*vide* THE LANCET, 1926, ii., 1203). It is far more important to treat the underlying conditions or causes just mentioned than to concentrate on reducing the height of the blood pressure, which to some extent is a compensatory mechanism, for to bring it down rapidly and considerably may only make the patient, if, indeed, he was one before, worse. In 1901 Osler published a paper with the wisely paradoxical title, the Advantages of a Trace of Albumen and a few Tube Casts in the Urine of Men over Fifty Years of Age, and in 1912 he wrote on High Blood Pressure, its Associations, Advantages, and Disadvantages. Prophylactic measures in the initial stages are, of course, the most effective means of treatment.

Preventive or Prophylactic Measures.

A periodic overhaul once or, perhaps, twice a year, such as the wise are accustomed to submit to at the dentist's hands, is an insurance against chronic disease, and is particularly desirable for those with a family history of high blood pressure and its effects. The discovery that the blood pressure is rising steadily or is considerably above the normal makes it essential to review the conditions of life so as to obviate causes connected with occupation, environment, diet, and infection. A hard-working and hard-living man of affairs must relax and reduce the stress and strain of his existence, he must learn to play, to take real holidays and frequent days or week-ends off, to follow hobbies, and avoid overeating, especially excess of meaty foods and their extracts; it is indeed a good, if not popular, rule to stop eating before the appetite is completely satisfied. Regular exercise within his powers should be encouraged. The moral is moderation in all things and freedom from strain of every kind, bodily and mental. To warn a person against worry is easy, but such advice is more helpful when backed up by a prescription for a bromide mixture to ensure some measure of philosophic calm in occasional emergencies. A search must be instituted for any chronic focus of infection in the teeth, tonsils, accessory nasal sinuses, gall-bladder and appendix, prostate, and indigestion and intestinal disorder should receive due attention. A tendency to obesity, especially about the menopause when endocrine deficiency may play a part, should be controlled.

The Management of Patients with fully established High Blood Pressure.

The treatment of a patient with fully established high blood pressure depends on wise direction based on personal knowledge of the individual, which may give a clue to the important ætiological factor at work. Of the several possible factors more than one may be concerned, and a right decision on this problem, which may be far from easy, should be more within the power of the regular medical attendant, who knows all the circumstances, than of anyone else. The general principles outlined in the last paragraph hold good, especially encouragement of the patient and emphasis on the share that his coöperation plays in his future. Moderation should be the keynote of treatment, which, it may again be insisted, should be not so much of the supernormal blood pressure as of the patient's manner of life. The blood pressure should not be taken frequently, and it is usually advisable not to communicate the exact figure in millimetres of mercury, as it is easy to breed hypochondriasis by information that the pressure has gone up so many points. Although the treatment of nephritic patients with high blood pressure is different from that of simple hyperpiesia, it may be worth while to quote the perhaps exaggerated aphorism ascribed to the late Dr. W. H. Dickinson that "the great danger of chronic nephritis is that someone will find it out and try to treat it," for too energetic measures may do much harm by knocking down the patient at the same time as the blood pressure.

Diet can easily be too severely restricted; although an exclusive milk diet, as in Karell's cure (2–3 pints daily), may be useful for a few days, especially when the patient is in bed, the food supplied should be sufficient from a caloric point of view, and any risk of semi-starvation must be avoided. The general practice is to cut down the protein, and to allow some white meat, chicken, and fish, but to proscribe red meat, a distinction making little or no difference to the patient's condition. In the light of some American observations of an increased uric acid content of the blood in about 40 per cent. of the cases of hyperpiesia, it would appear probable that a diminished protein and purin diet would be mainly of value in patients showing evidence of such disordered protein metabolism and of gout. Clear soups, meat extracts, sweetbread, strong tea and coffee, are best avoided; vegetables and fresh fruit are advisable, and may be useful in providing vitamins and in preventing constipation; but a free carbohydrate diet must be curtailed if it causes obesity or dyspepsia. On the whole, excess of food is probably rather more deleterious than the special quality of the constituents; the diet should be simple and sufficiently varied to avoid monotony. The statement that table salt raises the pressure is open to doubt, and in the absence of cardiorenal complications and dropsy a salt-free diet is more troublesome than useful. It may be noted that recently large doses of calcium or potassium chloride have been advocated as a means of lowering high blood pressure. A moderately restricted intake of water has usually been advocated on the ground that increased volume of the blood imposes more work on the heart and raises the blood pressure; on the other hand, free drinking of waters, as at spas, though not exclusively there, is sometimes followed by a notable fall of blood pressure; the difficulty is to determine beforehand what patients will react in this favourable manner. Although there is not any evidence that alcohol directly raises blood pressure, its generally depressing and degenerative influence on the tissues renders strict moderation highly advisable. Tobacco is usually regarded as undesirable for patients with high pressure, and it certainly causes an immediate though transient rise of blood pressure, followed by a fall to or below normal. But in confirmed smokers in health the blood pressure tends to be low, and as tobacco-smoking commonly has a soothing influence it would appear

unnecessary to deprive the patients of this solace unless they are conscious of any ill-effects, such as cardiac pain or irregularity.

Rest and Exercise.—High blood pressure is undoubtedly reduced by rest in bed, as, indeed, it normally is in the recumbent position, but this is a temporary result, and with a return to ordinary life it resumes its previous character. Still a full night's rest is always beneficial, and occasionally a whole day in bed does good. The heart may thereby be relieved of strain, but the underlying factors of the raised blood pressure are not likely to be influenced, except, perhaps, psychologically. Rest in bed may become necessary for subsequent myocardial failure, but this is another story. Exercise of various kinds, especially in the fresh air, according to the patient's powers and never so extreme as to cause dyspnœa or other distress, is advisable both bodily and mentally. Failing opportunity for exercise in the open, breathing and other forms of indoor exertion have their place, as has massage in certain circumstances.

Baths.—On *a priori* considerations hot baths would seem suitable, but their value has not escaped some criticism, for they raise the systolic pressure slightly while lowering the diastolic pressure to a greater degree, and thus increase the work of the heart. Cold baths are undesirable, as they raise the blood pressure. Patients are often greatly improved and their pressures lowered by a visit to a spa, where facilities for several forms of treatment, freedom from worry, and the psychological effect of change play a part. Residence in a warm climate, a prescription more easy to give than to carry out, exerts a beneficial influence.

High frequency currents lower the pressure for a time; *diathermy* is said to keep the pressure down much longer, so that eventually monthly treatments are sufficient to maintain a reduction permanently down to a level appropriate for the individual patient. Ultra-violet rays are also stated to have a similar effect; in this method, as in diathermy, the mode of action is not certainly known, but Sir Thomas Lewis's work suggests that a histamine-like body is liberated from the damaged skin. *Lumbar puncture* and *venesection* at once reduce the pressure for a short time, and may be useful in the emergencies of hyperpietic crises, but their effect is very transient.

Drug treatment is the least important, and it is significant that so many have been advocated. Bromides are, on the whole, the most effective, and, of course, act by relieving mental strain and anxiety. Of the vaso-dilators, mannitol nitrate and erythrol tetranitrate are stated to have a more prolonged effect than the commonly used trinitrin. The effects of nitrites are fugitive only, but occasionally they relieve headache and insomnia. Hippurates and guipsin have not come up to their initial reputation, and benzyl benzoate and extract of liver, the effect of which is said not to be due to histamine or choline, are on their trial. Calomel either in minute (1-20th gr. t.d.s.) doses or in larger quantities (½ to 1 gr.) once a week appears to benefit the patients. Constipation should be prevented, but the intestinal antiseptics have been generally disappointing. Iodides have been largely used, but they do not have any direct effect; it has been suggested that their action is indirect by stimulating the thyroid, but the disappointing effect of thyroid extract by the mouth does not render this explanation convincing. Ovarian, or corpus luteum extract, has been recommended for the menopausal high blood pressure. Drugs, such as aconite and antimony, which reduce blood pressure by depressing the heart, should not be used, but chloral in 5 gr. doses is sometimes useful.

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Special Articles.

PRESERVATIVES AND COLOURING MATTER IN FOOD.

THE NEW REGULATIONS.

WHEN the Minister of Health made the Public Health (Preservatives, &c., in Food) Regulations on August 4th, 1925, he directed that they should not come into operation as a whole before Jan. 1st, 1927, and that parts of them should be still further postponed. Recently, on Dec. 10th, he amended the Regulations, partly in points of substance and partly in respect of the dates of their operation, to which reference will be made presently. It will be recalled that the Regulations of 1925 followed in the main the recommendations contained in the final report of the Departmental Committee (presided over by Sir H. C. Monro) appointed in July, 1923, to inquire into the use of preservatives and colouring matters in food.

Prohibitions and Permissions.

The Committee's principal conclusions were that preservatives should be prohibited in all articles of food or drink offered for sale, whether manufactured in this country or imported, but an exception was made in favour of specified proportions of sulphur dioxide and benzoic acid. The Committee went on to say that the sale of any preparation as a food preservative should be declared illegal unless accompanied by a clear description of its composition and strength and unless the preparation was free from impurities and contained no more than 1/100th part of a grain of arsenic or 1/7th of a grain of lead to the pound. It recommended that the use of a copper salt to colour peas or other vegetables should be prohibited and that the Ministry should issue a schedule of non-injurious colouring matters. These recommendations were substantially followed in the 1925 Regulations, wherein will be found two important schedules. The first of these contained in Part I. a list of articles of food and drink which may contain preservative and specified the nature and proportion of the preservative in each case, and in Part II. a list of the colouring matters which may not be added to articles of food; the second schedule dealt with the labelling of preservatives and articles of food containing preservative. The Regulations define "preservative" as meaning "any substance which is capable of inhibiting, retarding, or arresting the process of fermentation, acidification, or other decomposition of food or of masking any of the evidences of putrefaction," but excluding common salt, saltpetre, sugars, acetic acid, or vinegar, alcohol or potable spirits, herbs, hop extract, spices, and essential oils used for flavouring purposes or any substance added to food by the process of curing known as smoking. To this list of permitted substances a recent amendment has added glycerine. Local authorities have the duty of enforcing the 1925 Regulations in so far as they relate to the sale of articles of food and preservatives; the Customs authorities are naturally concerned as to imported articles of food. It will now be an offence to manufacture or sell any article of food which contains an unauthorised preservative or colouring matter. It will also be an offence to violate the labelling requirements, though there are exceptions in favour of sales in restaurants and certain other cases. Comment was made upon the permitted preservatives when the Regulations were first published some 15 months ago.[1] The recent amendments have modified the permissive provisions in respect of fruit and fruit pulp of all kinds, jam, marmalade, and fruit jelly, and crystallised glacé or cured fruit (including candied peel). These items are in part reclassified, with a restatement of

[1] THE LANCET, 1925, ii., 413.

the maximum permitted proportion of sulphuric dioxide in each case.

Dates of Operation.

The Committee recommended, and the Minister of Health conceded, that manufacturers and importers should be allowed a period of grace to clear existing stocks. The Minister states that the previous postponement of operation has not succeeded in meeting the requirements of the parties concerned, but he finds himself unable to grant any extension. He suggests that local authorities may consider it desirable to refrain from initiating prosecutions for a few months till stocks are cleared. This is an unfortunate and unconstitutional, though possibly convenient, course. Penal provisions should not be enacted and brought into force unless and until it is intended that they shall be executed. To give a local power of dispensation will lead to strange discriminations up and down the country. The Ministerial attitude is like that of the Ministry of Agriculture when the Milk and Dairies Order was lately attacked in the House of Lords. Lord Bledisloe's official defence in effect admitted that parts of the Order might be mistaken and extravagant, but said that local authorities would be given a departmental hint not to be too severe. This is the wrong way to legislate. Regulations should not be made more drastic than the circumstances require, nor should they operate until the moment is ripe. The actual dates of operation of the 1925 Regulations (as amended) are as follows: for bacon, ham, egg yolk, and articles of food containing preservative necessarily introduced by the use of preserved margarine in their preservation, July 1st, 1927; for butter, cream, and articles of food containing preservative necessarily introduced by the use in their preparation of preserved bacon, ham, egg yolk, or cream, Jan. 1st, 1928; for articles of food containing preservative necessarily introduced by the use in their preparation of preserved butter, July 1st, 1928; for all other foods, Jan. 1st, 1927. It may be added that the Stationery Office is conveniently reprinting the principal regulations of 1925 with the insertion of the recent amendments in the form in which they will now operate.

The Onus of Proof.

It remains to notice certain other matters in relation to the administration of the new law. The desired object is that the prohibitions and limitations in the Regulations should have binding effect in a court of law in proceedings under the Sale of Food and Drugs Acts. That is to say, it should be sufficient for the prosecution to prove that a preservative or colouring matter is present in an article of food in contravention of the Regulations; it should be possible to eliminate the usual conflict of expert evidence on the question whether the amount of such preservative or colouring matter so present is or is not injurious to health. It is doubtful how far this desirable result can be attained by mere Regulation without a fresh Act of Parliament. The Departmental Committee drew attention to an important difference in the burden of proof under the Sale of Food and Drugs Acts and under the Butter and Margarine Act of 1907. In the former case the person charged has to prove his absence of knowledge (in view of Sections 3 and 5 of the Sale of Food and Drugs Act, 1875); in the latter case the onus of proof that the offence is wilful lies on the prosecution. This difference should be adjusted by Parliament. Another point remarked by the Committee was the difficulty of bringing home an offence to the manufacturer. The retailer may escape, though an infringement of the law has been proved, because he is not to blame for the impurity or unwholesomeness of an article. The manufacturer who is responsible is brought within the law by Section 25 of the Sale of Food and Drugs Act, 1875, and Section 20 of the Act of 1899 which allow a defendant to plead that the goods were sold to him with a written warranty. But it has usually been found that the article has passed through so many hands and so much time has elapsed, that prosecution of the manufacturer is useless. As has already been mentioned, the 1925 Regulations penalise not only the sale, but also the manufacture for sale, of articles of food which offend against the prohibition or limitation of preservatives and colouring matter. Much may be hoped of this improvement in the law.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Medical Secrecy.

MEDICAL secrecy has always been a source of controversy, and this is growing steadily more acute because, with the socialisation of medicine, doctors are being asked for more and more certificates about their patients. It is suggested that the time has come to set up some sort of rule to define the medical man's position, and Dr. Paul Gallois suggests that the Académie de Médecine should ask Parliament to incorporate statements in the law to the following effect: "Medical secrecy is part of a contract between the doctor and his patient, and the doctor cannot surrender his patient's confidence to any other person. The patient alone can release the doctor from his obligation to maintain secrecy, in which case, however, the doctor is not bound to speak. A doctor must not divulge information given by his patient, except in the form of a certificate, and such a certificate should be sent to the *patient*, who may use it if he wishes and thus takes the responsibility for the facts being made known. Secrecy is not limited to confidential information given by the patient, but extends to everything that the doctor is able to see, hear, or discover if revelation of it might be harmful or merely disagreeable to the patient; this applies even to cases in which the doctor has no wish to be damaging. Short of superior force a doctor must not in his dealings with any person represent two different interests and consequently fulfil two opposite functions. For example, he cannot act, at one and the same time, as the doctor treating the case and as the doctor who is in charge of it in some official or expert capacity. He should also avoid treating simultaneously two people whose interests are at variance. If for the good of the community the State has need of medical information, it can obtain it by asking from the patient or his agents-at-law a certificate from the doctor in charge, and the State should also retain the services of medical men for purposes of inquiry where no adequate certificate is obtainable."

Fuso-spirochætosis.

Dr. Paul Lafosse and Dr. Jacques Langle, of Vincennes, have reported on 53 cases of bronchitis in which the sputum contained large numbers of fusiform bacilli together with Vincent's spirochæte. These patients have a painful, paroxysmal, noisy cough followed by expectoration of variable quantity; in three cases the sputum had a stale smell—at one time even sickly. Hæmoptysis occurred only eight times and produced no general disturbance, the patients waking up from sleep to find the mouth full of blood. Constitutional symptoms were unusual and no fever was observed. Clinical examination showed only the common signs of bronchitis and slight congestion; X ray examination was nearly always negative, and tubercle bacilli were never found in the sputum, which, however, revealed, in the 53 cases, a symbiosis between the fusiform bacillus and the spirochæte. Treatment with arsenic always improved the condition, at any rate for a time, and removed the association of bacillus and spirochæte. These features of the disease made it easy to correct the diagnosis of pulmonary tuberculosis which had been attached to many of the cases.

Insulin.

Desgrez, Rathery, and Froment, of Paris, classify diabetics treated by insulin in three groups: (1)

those in which insulin only does good so long as its administration is continued, the insulin acting as a substitutive remedy like thyroid extract in myxœdema; (2) those who react badly to insulin, probably because their condition is not determined solely by the pancreas; and (3) those in whom insulin appears to be actually curative, since their improvement continues even when doses are reduced or made less frequent. Without going so far as to speak of true cure, it seems that in the last group of cases there is functional recuperation—partial at any rate—of carbohydrate metabolism, though, of course, the patients have to be carefully watched for fear of relapse.

The Centenary of Laënnec.

The ceremonies to celebrate the hundredth anniversary of Laënnec's death began at Paris on Dec. 13th with a requiem mass at Notre-Dame, after which the delegates were received at the Académie de Médecine and the Hôtel de Ville. In the evening the President of the Republic attended an assembly at the Sorbonne, held under the presidency of Mr. Painlevé, Minister for War, and orations on various aspects of Laënnec's work were delivered, after which the foreign delegates presented addresses to the President. The colleges and societies of Great Britain were represented by Sir StClair Thomson, Sir John Broadbent, Sir Edwin Bramwell, Sir Percival Hartley, and Prof. William Stirling. The evening's proceedings ended with a speech by Mr. Painlevé. On the following day visits were paid to the hospital where Laënnec received instruction from Corvisart, to the house in rue de l'Abbé Grégoire where he last lived, and to the Carnavalet Museum. In the afternoon Mr. Herriot, Minister of Education, presided over a formal session of the Académie de Médecine, whilst on the following day there was a reception at the Hôpital Laënnec and visits to the Leon Bourgeois Dispensary, and to the Hôpital Necker where Laënnec was physician. At the Pasteur Institute Prof. A. Calmette gave an address on the prevention of tuberculosis since Laënnec, and the three days' celebration closed with a banquet at the Palais d'Orsay.

Gabriel Petit, in collaboration with Panisset and Kfouri, has succeeded in overcoming the well-known resistance of the horse to tubercle by inoculating bacilli directly into the lung through the bronchi. To produce in the lungs of a horse—and in the lungs alone—tuberculous lesions of slow development and of the human clinical type, is to extend greatly the field of experimental work.

Tuberculous Infection of the Newborn.

Prof. A. Couvelaire during the past five years has had under observation 357 children born of tuberculous mothers and has found that the percentage of stillbirths (which, on the average, was 10·6) is considerably greater in cases where the maternal tuberculosis is severe. At the beginning of his investigations the death-rate during the first month of life was 33 per cent., but in the last series of 126 cases it had fallen to 7·2 per cent., thanks to improvement of conditions, the babies being reared in strict isolation from their mothers. This fact is evidence against the theory that most babies dying in the first month are congenitally infected. It is not less true, however, that certain cases of death from malnutrition, steadily progressive from birth, remain unexplained. Recent research has suggested that side by side with the very rare congenital infection which produces specific lesions there exists a commoner trans-placental transmission of the virus.[1]

At a meeting of the Académie de Médecine on Dec. 7th this question was generally discussed, and Prof. L. Bernard pointed out that the filterable forms of virus obtained by Couvelaire have not been proved the actual cause of tuberculosis in the fœtus. He pointed out that it is still very doubtful if there is such a thing as placental transmission of tuberculosis, and advised that a conservative attitude should be taken towards the problem so as to avoid creating false impressions in the public mind.

[1] THE LANCET, 1926, i., 780.

MEDICINE AND THE LAW.

An Abortive Prosecution.

ON Dec. 22nd the stipendiary magistrate at Clerkenwell police-court dismissed a summons against Prof. E. B. Verney, of University College, for "unlawfully having in his possession a certain dog, to wit a small mongrel wolfhound, the property of Frederick Smythe, knowing such dog to have been stolen." No opportunity arose for Prof. Verney to make his reply to this charge, the magistrate dismissing the summons on the preliminary ground that there was no evidence of possession. Mr. Roland Oliver, K.C., who appeared for the defendant, protested vigorously against a society putting up a nominal prosecutor to attack Prof. Verney and the University College which carried on vivisection under a statutory licence. He described the proceedings as an abuse of the court, and asked for costs. The magistrate presumably agreed, for he awarded five guineas costs and stated that he did not think the prosecution should have been launched. He did not further enlarge upon the reasons for his decision; indeed, he disclaimed any intention of pronouncing upon the merits of the case. If, however, there are those who infer that an experienced and disinterested magistrate would regard the interposition of the society as evidence rather of a desire not to pretermit an opportunity for propaganda than of a fair and reasonable resort to legal process, their impression will probably not be removed by reading the report of the case published in another column (p. 50). It happened that the copy of the *Times* which contained an account of this abortive prosecution of a research worker by a body which had not prepared itself to prove the elements of its accusation, also contained an account of the valuable results achieved by medical research at Mill Hill in the direction of rendering dogs immune from distemper.

Medical Evidence of Insanity.

In dismissing the appeal of Cecil Roodhouse, convicted at Leeds Assizes of the murder of his sister, the Court of Criminal Appeal on Dec. 20th placed the usual legal limitations upon the value of medical evidence of insanity. It had been argued on behalf of the appellant that, being defended under the Poor Prisoners Rules, he could not obtain expert evidence of his insanity, but that the opinion of the local doctors appeared to indicate epilepsy as well as adolescent insanity. Lord Hewart used the occasion to point out that the responsibility of deciding the question of insanity rests with judge and jury at the trial, not with the medical expert. "There are those who would let it rest with the opinion of a doctor, but at present the evidence of doctors is subject to the good judgment of the jury; we have not yet come to the time when a man can get off by getting a doctor to go into the witness-box." The rather notorious difference between what are called the legal and medical views of insanity was further illustrated by Lord Hewart's subsequent observations. "It has now been said that, had the judge at trial collected all the available evidence of possible insanity and put it cumulatively before the jury, the verdict would have been a different one. Probably it would; but then the judge would not have been doing his duty, because he is expected to put the case to the jury according to the proper practice of law." And so we see once again that in a given case the medical profession may be perfectly satisfied that it detects the presence of mental disease. Yet the legal profession—or, at any rate, the judges who express the official legal view—may tell the jury to reject all evidence of abnormality as justification for a verdict of "not guilty" unless the weight of such evidence is so overwhelming as to turn the scale at that point where, according to a legal and in a sense an artificial standard, criminal irresponsibility at last begins.

Public Health Services.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

A BRIEF SURVEY OF 1925.

AT the wish of the Ministry of Health the reports of medical officers for the year included a survey of progress made during the preceding five years. This, naturally, resulted in their late issue in a number of cases, but many on which we have had the opportunity of commenting certainly indicate substantial progress in public health measures, in spite of hampering financial restrictions. Big schemes, of course, have had to wait.

Environmental.

The *housing* shortage is still acute, and the districts able to provide for the natural increase of the population are fortunate. Private enterprise houses are only built for sale. There is much subletting of municipal houses, and there are no houses being built for the poorest-paid workers. Slum clearances are held up by the shortage. The new Bill for rural housing is arousing the hope of better accommodation for the country labourer.

Sewage disposal and the prevention of the pollution of rivers have made progress, and in many districts the bio-aeration system appears to meet with approval. As regards *refuse disposal*, there have been many complaints of the dumping of the refuse of London and other towns in the country districts, somewhat mitigated by the Ministry's suggestions for the regulation of tips.

As regards *water-supply*, chlorination has ceased to be a temporary measure, and the competition for river waters seems to point to the need for a national survey and allocation of all the sources of water-supply. The exact meaning of the presence of the colon bacillus in waters and the influence of seagulls on its introduction are matters of interest.

The country appears to be waking up about *smoke abatement*. Classes for stokers are being held, and persuasion, education, and advice by experts are becoming recognised as a better way than prosecutions. Efforts are being continued to find a satisfactory smokeless domestic fuel, and thus to acquire the desired result without running counter to the national desire for an open fire. Local Bills now contain powers to stop the emission of grit. There is much encouragement of the use of gas and electricity. Manchester, through its regional committee, may yet show England the way to deal with industrial smoke.

The campaign against *conservancy closets* in towns is becoming more active, and even Hull is now taking a hand.

Food.

The use of preservatives such as boric acid appears to be going on up to the time-limit, and the report of the borough analyst for Salford shows that "skimmed milk masquerading as cream" may be taken as typical of many food sophistications. The meat regulations are doing good, and in several counties demonstrations have been held at the abattoirs for the instruction of sanitary inspectors in meat inspection. There is a general expression of opinion in favour of the extension of the regulations to cooked meats.

Graded milks make slow progress, but have a useful educational effect. Clean milk competitions are numerous, and many municipal institutions give the preference to Certified and Grade A (tuberculin-tested) milk. There is no lessened frequency of tuberculous milk and udders, but good results are hoped from the reintroduction of the Tuberculosis Order on Sept. 1st, 1925. Some counties have appointed whole-time veterinary inspectors, others have appointed inspectors under the Diseases of Animals Acts, while the remainder have done nothing. A few rural district councils have arranged for regular veterinary inspection of their milk herds.

Infectious Diseases.

The Schick and Dick tests and subsequent immunisation are being increasingly used for hospital staffs, for the prevention of cross-infection, and for the abolition of outbreaks in institutions. Vaccines are being suggested for measles, scarlet fever, and pneumonia. The prevailing type of scarlet fever is so mild that removal to hospital is being discouraged. The stay in hospital is being shortened, and it is becoming common to call in the aid of the oto-rhinologist. Small-pox has been prevalent in many districts, but usually of the mild type, and much difficulty is reported in securing the vaccination of contacts. Typhoid is referred to as almost extinct, and a large proportion of the few remaining cases are attributed to shell-fish.

The reports of the *venereal disease* clinics show that syphilis is less prevalent and that attendances are improving, though probably not many districts approach the low Edinburgh default of 11·3 per cent. Most clinics now provide facilities for daily irrigation and intermediate treatment. Owing to the reluctance of women to attend the clinics special facilities are provided in many districts for women and children.

In the reports on *tuberculosis*, the most frequent wants mentioned are increased provision for advanced cases and for bone and joint tuberculosis. The results of training for vocations have usually been disappointing. Many counties and districts are now instituting complete orthopædic schemes, including all forms of crippling in addition to tuberculosis, with a central hospital and out-patient feeders.

Influenza was more prevalent during 1925 than in the preceding year. *Encephalitis lethargica* was less so, but the case fatality was, as a rule, greater. The need for special educational institutions for the survivors from this disease is being considered. As regards *cancer*, early treatment still holds the field, and to this end facilities for obtaining a consultant's opinion free of charge have been arranged by some authorities. The need for research into the ætiology of *rheumatism* and for the provision of institutions on open-air lines for affected children is being more and more recognised.

Maternity and Child Welfare.

Many reports refer to high maternal and neonatal mortalities. Antenatal hygiene is gradually developing into real preventive midwifery. Municipal maternity homes hold antenatal clinics, and in some cases make attendance at the antenatal clinic a condition of admission. A considerable number of authorities have appointed obstetricians to conduct the antenatal clinics. In many districts courses of lectures by specialists on the danger signals in pregnancy and antenatal work are arranged for the midwives. The need for more maternity hospitals is more or less general, especially in view of present housing conditions.

Ophthalmia neonatorum still takes its toll of eyesight, owing to the failure to secure efficient treatment promptly. Light treatment is being tried fairly extensively both for rickety and debilitated children and for tuberculosis. In the latter disease opinions as to its value vary from guarded to enthusiastic. Arrangements for the operative treatment of tonsils and adenoids are being improved, and in many districts all children are admitted to hospital or nursing home for the operation.

Administration.

Much progress has been made towards the coördination of the public health services so as to avoid overlapping and to secure one medical and nursing staff for children from birth to the school-leaving age. Attempts are being generally made to secure the pooling of isolation and small-pox hospitals in

county areas, as it is found that in these days of motor transport one efficiently staffed and equipped hospital is infinitely better than the large number of unsatisfactory small hospitals which have been the rule up to now.

The need for the education of the public in the essentials of healthy living, and especially in the right choice of food and in the new ideals of obstetric care, is stressed in most of the reports.

SCHOOL MEDICAL SERVICE.

A SURVEY OF 1925.

IN spite of great financial difficulties, the service showed real progress in every branch of its work during the year. Including routine and special cases, 2,619,350 children, or more than half of those in attendance at school, were examined, an increase of nearly 200,000 over the previous year. The school staff now consists of 1140 whole-time doctors—or one to every 8500 children—786 specialists employed on ophthalmic, aural, anæsthetic, X ray and orthopædic work, 584 dentists, and 4520 school nurses. The cost of this service in 1924–25 was £1,300,347, or about 2·25 per cent. of the cost of public elementary education—not a high premium for health insurance.

Preventive measures, designed to teach the child the way of personal health and to lay the foundations of national well-being, are gaining ground. The educative nature of this work is now recognised by the closer union of all administrative and executive workers. The Director of Education, the school-teacher, the attendance officer, and the school doctor each take a share in the work of child welfare, and the team-work now possible is bringing us nearer the goal. The effective help and interest of the teachers, without which the medical work could not go on, has in places gone so far as to provide convalescent homes, country holidays, and funds for clothing.

In view of the importance of the pre-school years, on which so much of nurture depends, it is gratifying to note the increasing coöperation between the public health and the school medical services; medical supervision will soon be continuous from birth to adolescence, for in some districts—e.g., Leicester—the factory surgeons take their part in the roster. In districts such as Acton (Dr. G. J. Thomas) and Willesden (Dr. G. Buchan), defects discovered at the welfare centre receive treatment at the school clinics, and it has been noted that children who have come from the centres present a much lower incidence of defects (even allowing for more efficient parents) than those who have not been under such supervision. Fuller advantage is being taken of the activities of voluntary care committees and associations, notably those for mental welfare, which have established many occupation centres for low-grade mental defectives, and the Invalid Children's Aid Association which restores many ailing children to health by convalescent treatment. The Central Council for the Crippled Child is now an integral part of the mechanism for dealing with physically defective children in 122 educational areas. A complete scheme includes ascertainment, provision of remedial facilities, and provision of efficient after-care; it is under this last heading that organisers of physical education, beside suggesting and supervising the physique and morale of the normal child, can render valuable service by arranging for remedial and re-educative exercises.

Measures to prevent debilitating and crippling influences have been developed along various lines. The most successful results are to be seen in the open-air schools, the present accommodation of which is still inadequate for the needs of the country. The cost per child at one of these schools averages £30, against £12 per child per annum in the ordinary elementary school, but this extra cost is fully justified by the permanency of the good results obtained; Dr. G. A. Auden, for instance, found that 89 per cent. of the 748 Birmingham open-air scholars maintained the improvement which all the children show when first admitted. Nursery schools have worked wonders for younger children, as may be seen from the report of the Margaret MacMillan School at Deptford.

Ninety-six additional school clinics have been opened during the year—there are now only five education authorities without—113 authorities have extended their existing provision. Treatment of visual defects is more general and comprehensive than any other. Of 184,533 cases of defective eyesight and squint, 80 per cent. were treated. It is now realised that infancy is the time for effective treatment to begin, and much valuable work has been done among pre-school children, witness Dr. R. R. Garden's orthoptic treatment of Bristol infants. The increase in facilities for in-patient treatment for the removal of tonsils and adenoids has resulted in the disuse of 11 school clinics for this purpose, the work having been transferred to hospitals where the child can remain all night. In Nottingham the aural surgeon, Mr. H. B. Tawse, uses artificial sunlight as a general tonic on children for a few weeks prior to operation. Ionisation is found as a rule to be the most rapid and efficient method of treatment for various forms of ear disease, and 26 additional authorities made arrangements for this during the year. Mr. A. G. Wells (L.C.C.) has extended ionisation to include a number of cases complicated with attic, mastoid, and other diseases. Dr. Alfred Friel (L.C.C.) gives a clear outline of the method in Sir George Newman's Report for 1925 (page 49).

The facilities for dental treatment have been extended in most areas, and 133 new dental clinics were opened, leaving only 28 areas where no provision is as yet made. The most effective training for blind children is that given in residential schools; unfortunately their cost is almost prohibitive, and excellent work is being done in special day schools.

The difficulty of mental defect is increasingly recognised. Mental defectives, says Sir George Newman, are expensive to educate, but they are more expensive to neglect. Two Acts of Parliament, if only they were made effective, require the appropriate authorities to deal with such defectives. The ideal solution seems to lie in the proper training of the child and adolescent, and the effective control of the adult. Much has been done in providing special and residential schools.

Encephalitis lethargica showed a fall in the numbers of new cases during 1925, and provision for treatment of after-effects has been made in two wards at the Northern Hospital, Winchmore Hill, London. Valuable work has been done by school doctors in bringing to light the sequelæ of this disease; residential treatment is generally regarded as the only successful way of dealing with these cases, few of them respond to treatment as mentally defectives. Some other infectious diseases have been unusually prevalent. Small-pox was rife in parts of Durham, Yorkshire, Northumberland, and Nottingham; of 2139 children of school age who developed small-pox only five are stated to have been successfully vaccinated prior to the attack.

The hygiene and sanitation of many of the schools throughout the country leaves much to be desired, and must be tackled soon if preventive medicine is to become effective. Our knowledge of the normal physiology and variations of normal childhood is at present limited, as is our knowledge of the ætiology of many of the common diseases of childhood. The relationship of heredity, environment, climate, and diet to physique and character is but imperfectly understood, and the exceptional opportunities of school medical work for solving these difficulties are being widely utilised. Dr. G. Woolham has been studying the physical capacity of Manchester schoolboys and has worked out formulæ for assessing physical fitness. Nutrition of school-children and sleep in relation to housing conditions and diseases have been investigated by Dr. M. Gross, of Stafford. Thyroid diseases and iodine deficiency have been

investigated by Dr. M. Fraser, of Cumberland, who maintains that goitre is but one of the lesser manifestations of iodine deprivation. Dr. W. M. Ash, of Derbyshire, sounds a warning note on iodine medication through a public water supply. Dr. Middleton Martin, of Gloucester, administers 1/10 gr. of iodine in tablet form for goitrous children, while Dr. Dunstan Brewer, of Swindon, uses collosal iodine. Dr. E. H. M. Milligan, of Glossop, in his investigation found that rheumatism is more prevalent in goitrous children. These and other researches on thyroid abnormalities are being correlated and analysed by Dr. Percy Stocks, of University College, and Dr. Maurice Campbell, of Guy's Hospital, who hope to summarise their findings in the near future.

Rheumatism with its protean manifestations is most prevalent during the school years of childhood, and Dr. C. J. Thomas (L.C.C.) computes that there are 10,000 rheumatic children in London alone. In many districts school doctors are working in collaboration with practitioners, consultants, and University colleagues in continuous efforts to solve the many mysteries of this disease. In Bristol Dr. J. Morrison has outlined the influence of environment in causing rheumatic heart disease; Dr. A. P. Thompson (Birmingham) has been working along somewhat similar lines; and Dr. R. H. Vercoe (Chelmsford) finds parental history the most important causal association and dampness of the house of less importance. In Cheshire Drs. A. V. Stocks, Marjorie Grant, and W. J. McIvor are working along some original lines bearing on this disease, and Dr. E. H. Snell, of Coventry, and Dr. Mary Weston, of Leicester, have investigated chorea in relation to rheumatism. These individual outlines will be finally worked into the complete mosaic by a committee of investigation appointed by the British Medical Association.

These are only a few of the original and scientific investigations carried out by school doctors during 1925, but they serve as an augury for the future, and an indication of the vitality that permeates the whole organisation.

MENTAL HOSPITAL REPORTS.

THE *Devon Mental Hospital* at *Exminster* had 1216 patients on its register at the end of 1925, an increase of 35 on the year before, and the accommodation for women is becoming strained. The death-rate was 6·63 per cent., the lowest since 1899. The cause of death was verified by autopsy in 63 per cent. of cases The recovery rate was 37·4 per cent., and among the private patients alone 47·4 per cent. There were 21 cases of typhoid, with two deaths. Systematic search revealed one carrier, and as the disease has shown no abatement the staff and patients are all being inoculated, and the Widal test is being done on cases selected at random to test the efficacy of this protective measure. There is still a certain amount of dysentery. General paralytics are now being treated by induced malaria, and renal function tests are carried out on all subjects of operation. The value of luminal in epilepsy has been investigated. Sixteen operations were performed in the new operating theatre by the visiting surgeon, and the ophthalmic surgeon saw a number of cases of eye disease and eyestrain. Thirty-eight patients were examined in the new X ray room; all accident cases are radiographed. The new dental department has been visited by over 200 patients. It is excellent to learn that a fortnightly out-patient clinic has been opened at the Exeter Dispensary and that patients discharged from the hospital can report here for after-care. The clinic is run in coöperation with the Exeter City Mental Hospital. 113 patients were on parole, and whole day 'bus excursions, picnics, and blackberry and daffodil parties were greatly enjoyed by other patients. About 140 went to a travelling circus, and the time-table of dances, dramatic entertainments, &c., occupies three pages of the report. The Hobart mixer has effected such economy that it has been possible to dispense with one kitchen and an assistant cook. The vegetable-slicer has resulted in a saving of £22 on marmalade alone. The floor and walls of the central kitchen have been tiled, and still more aluminium ware has been introduced, reducing considerably the expense of breakages. The annual report is a specimen of the work turned out from the hospital's printing office, and is illustrated this year by two half-tone plates. Patients are also employed in the weaving-room, where blankets, tweeds, and serges are made; in mat-making, net-making, knitting, and tailoring.

A cinema and wireless apparatus and a special bath for hydrotherapy have been installed. The visiting Commissioners remark on the canvas rest which has been devised for the comfort of patients in the continuous bath, and add that "the spirit of progress which has been noticed on former occasions . . . has been admirably maintained."

The difficulty of finding suitable candidates for the nursing staff is increased by the lack of proper quarters. Nine more of the staff obtained their M.P.A. certificate during the year.

The annual report of the Asylums Committee of the *City of Birmingham* deals with two mental hospitals. At *Winson Green* there were 743 patients on Dec. 31st, 1925. The recovery rate was 45·6 per cent., a slight increase on the previous year, and well above the average figure. Recovered patients were sent out on trial before discharge, and received money grants where necessary. The death-rate was 7·7 per cent., the lowest since 1851. Post-mortem examinations were made in 63·8 per cent. of the deaths. In addition to spring influenza there were four cases of infective diarrhœa. Malarial treatment of general paralysis has resulted in improvement, but not in cure. 65 per cent. of the patients are employed in the house, grounds, and farm. Parole and short leave were granted to a large number. A wireless set was installed in the hall and a gramophone in each of the wards. At the end of 1925 no less than 64·5 per cent. of the nurses were fully qualified in mental nursing. The visiting Commissioners remark that "the conditions prevailing here afford an example of what can be done in an old institution under an administration based on modern methods . . . and a sympathetic regard for the comfort of those under care."

At *Rubery Hill and Hollymoor Mental Hospital* there were 1691 patients at the end of the year. The recovery rate was 39·15 per cent., but 68·03 per cent. of the direct admissions were discharged recovered or relieved. The death-rate was 6·32 per cent.; autopsies were performed in 74·7 per cent. An outbreak of typhoid occurred in the spring and affected three nurses and two patients. Every female patient was tested serologically, and 13 carriers were detected. The outbreak was controlled by vaccination and segregation. The hospital has a visiting surgeon, rhinologist, gynæcologist, and dentist. About 830 patients are provided with employment in the wards, grounds, and workshops. Twenty-nine nurses obtained their M.P.A. certificate during the year. The hospital shares with Winson Green the services of a welfare visitor, who visits all patients on trial and some of those discharged and who also works in the wards. Considerable attention is paid to the elimination of toxic foci, and good results have followed this line of attack.

The *Wilts County Mental Hospital* had 1168 patients in residence on Dec. 31st, 1925, an increase of 110 during the year. The death-rate was 6·9 per cent., and autopsies were performed on 82 per cent. The general health was good, but there was a heavy incidence of dysentery—33 cases with 12 deaths. There was, however, no typhoid. The recovery rate was 36·1 per cent. All but three of the 84 patients discharged were sent out on probation first, 32 of them with a money grant. The committee remark on the attention attracted throughout the county by the idea of out-patient clinics in connexion with mental and general hospitals, and hope that a scheme may mature before long.

There are two mental hospitals in *Kent*. At *Barming Heath* there were 1793 patients at the end of the year; owing to the serious overcrowding on the female side a house was rented as a nurses' home. The admission-rate for males, on the other hand, was the lowest for more than 50 years. The death-rate was 6·2 per cent., and post-mortem examinations were made in 90·9 per cent. of the fatal cases; 20 per cent. were over 70 years of age. The recovery rate was 36 per cent. and the general health was good but for a severe epidemic of influenza in the spring. There was one case of dysentery and two of enteric. An occupation officer has been appointed, and 65·6 per cent. of the male patients are employed. Two more workshops, for mattress-making and upholstery, have been opened, and the printing shop extended. Various new forms of occupation have also been introduced for the women; mat-making, hat and glove-making, and basket-making. One female ward holds itself responsible for the care and repair of the linen and clothing of the corresponding male ward, and this personal note has interested a number of patients who previously refused to take up any work. A large proportion of patients are allowed parole, and three male wards and seven female wards have open doors. Cases considered fit for discharge are usually sent out on trial first. The Commissioners remark that they are impressed by the efficiency in management and the ardent efforts made by the staff of this hospital to do all that is possible for the welfare of the patients. The lighting system is at present unsatisfactory, and it is hoped to instal electricity when finances permit. Five wards on the male side are staffed by women nurses; 69 of the staff hold their M.P.A. certificate. At *Chartham Down* there were 1182 patients, and, as 174 more beds have been provided by the new blocks, there is vacant accommodation proportionate to the estimated increase in population for three or four years. The death-rate was 8 per cent. and the recovery rate 47 per cent. There was no dysentery and only mild influenza. The visiting Commissioners remark that "an earnest endeavour is being made to bring the hospital thoroughly up to date, although a great deal remains to be done." Suitable cases of general paralysis have been treated with induced malaria and others by the Stärke method with equally good results. A small clinical laboratory is being equipped, and an admission hospital is urgently needed. Fifty-three nurses hold their M.P.A. certificate.

The average number of patients in the *Roxburgh District Asylum* during the year 1925-26 was 357, including private patients and three voluntary boarders. The recovery rate was 27 per cent. and the death-rate 7·7 per cent. Post-mortem examinations were held on 18 out of the 28 patients who died. There was no serious epidemic or infectious disease. Some of the verandahs have been enlarged and a new mess-room for the nurses completed. Several patients were sent out on probation before discharge.

The *West Riding Mental Hospital* at *Wakefield* housed nearly 2200 patients at the end of 1925. The recovery rate was 16·62 per cent. and the death-rate 9·23 per cent. The superintendent points out that the apparent recovery rate is reduced by his practice of excluding from that figure the large number of discharged patients (nearly 40 per cent.) who were sent to the care of their relatives without much likelihood of recovery. Moreover, no less than 37 per cent. of the admissions during the year were to be regarded as definitely incurable. He includes among these all general paralytics, for he is not satisfied that any true cure has been produced among these patients, although any form of acute illness will probably cause a remission of symptoms. Post-mortem examinations were performed on 86 per cent. of the 197 deaths, and the results gave a tuberculosis incidence of only 3 per cent., while dysentery and typhoid only occurred in 0·5 per cent. each. The routine work on dysentery showed how dangerous it is to mix newly transferred cases with patients in residence, as about 20 per cent. of them presented a positive Flexner agglutination. A good deal of histological research was carried out in the pathological laboratory in addition to the routine work. Many structural alterations and improvements were completed, and congestion was relieved by the remodelling of a villa residence for females on parole and of a home for the Stanley Hall boys. An operating theatre will be ready shortly. Only eight patients were sent out on trial. This hospital is one of the pioneers in out-patient work, and 63 new cases were admitted during the year under review. It is regrettable, though, that the 12 cases found unsuitable for clinic treatment could not be admitted at once and without certification. Nine more nurses obtained their M.P.A. certificate.

There are two mental hospitals in Hampshire. At *Knowle* there were 1018 patients at the end of last year. This included a large number of senile cases and mental defectives, which accounts for the relatively low recovery rate of 22·65 per cent. The death-rate was 6·61 per cent., the cause being verified by autopsy in 63 per cent. of the total number. The general health has improved considerably. The number of deaths from tuberculosis has fallen from 22 in 1922 and 16 in 1924 to 5 in 1925; there were no cases of colitis and only two of typhoid fever. Eight carriers have been isolated, and the laboratory investigation is still proceeding. All the carriers are now kept isolated. The medical superintendent attributes the reduction in colitis to decrease in overcrowding, improved diet, cleanliness, and nursing, and more time spent in the open air. A ward has been reconstructed for the treatment of general paralytics by malaria. About 60 patients have parole within the grounds, and 30 more are allowed to go outside. Three male and two female wards are "open." The infirmary wards have been subdivided so as to provide long-needed admission wards. There is a well-equipped laboratory, and one of the attendants is being trained as assistant. Four male and six female nurses obtained their M.P.A. certificate during the year.

At *Park Prewett* there were 1153 patients on Dec. 31st last. There was a recovery rate of 25·69 per cent., reduced by the high percentage of unpromising admissions and the discharge of 40 patients to the care of their friends under Section 79 of the Act. The death-rate was 6·46 per cent. The general health during the year was good, and there were no epidemics. Parole is granted wherever possible, and many patients are allowed to sit up until 10 P.M. A consulting surgeon has been appointed, in addition to the consulting ophthalmologist. The dental surgeon has treated more than 400 patients. Only one patient suffered from tuberculosis, and this disease accounted for two deaths only. Verandahs are extensively used in treatment. There is a room for biochemical and bacteriological work, and an electrically heated continuous bath. It is hoped that the scheme for a new nurses' home will induce nurses to remain longer at the hospital. Thirty-five of the staff hold their M.P.A. certificate, nine more having obtained it during the year.

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED DEC. 18TH, 1926.

Notifications.—The following cases of infectious disease were notified during the week: Small-pox, 315 (last week 328); scarlet fever, 1531; diphtheria, 1111; enteric fever, 48; pneumonia, 1316; puerperal fever, 59; puerperal pyrexia, 109; cerebro-spinal fever, 9; acute poliomyelitis, 25; acute polio-encephalitis, 6; encephalitis lethargica, 41; continued fever, 1; dysentery, 6; ophthalmia neonatorum, 113. There was no case of cholera, plague, or typhus fever notified during the week.

Deaths.—In the aggregate of great towns, including London, there was no death from small-pox, 4 (1) from enteric fever, 28 (0) from measles, 5 (2) from scarlet fever, 35 (9) from whooping-cough, 40 (12) from diphtheria, 45 (12) from diarrhœa and enteritis under 2 years, and 60 (18) from influenza. The figures in parentheses are those for London itself.

PUBLIC HEALTH IN THE LOCAL LEGISLATION OF 1926.

IN so far as public health can be promoted by Acts of Parliament, the local are not less important than the general statutes. Progressive local authorities take the initiative; the rest of the country follows their example in time. In the campaign for public health the local skirmishings ahead of the general front line are always worth study and for this purpose the local Acts of 1926 provide good material. The Public Health Act of 1925 greatly enlarged the powers of local authorities, but evidently there is a demand in many places for powers still wider in matters like the protection of food supplies and the prevention of infectious disease. As to food, the local Acts of 1926 furnish frequent instances of the usual clauses prescribing adequate larder accommodation, restricting the handling or cooking of food by infected persons, regulating ice-cream and potted-meat manufacture, and empowering the supervision of the transport of food. There are also examples of clauses for penalising the original vendors of unsound food and authorising the search of vehicles, sacks, parcels, &c. The Chorley and Guildford Acts prohibit the introduction of inedible fats on premises where food is prepared. The Guildford Act prohibits the blowing of meat carcasses and makes food poisoning notifiable. Many localities obtained in 1926 a statutory widening of the definition of "infectious disease," the list in the Infectious Diseases (Notification) Act of 1889 being thus enlarged to include such illnesses as measles, German measles, whooping-cough, chicken-pox, scabies, ringworm, and influenza. As usual, restrictions have been placed in many places upon Sunday schools and entertainments in times of epidemic. Parents are to notify the head teacher of a child's infection. The withholding of information from medical officers is frequently made punishable. Power is taken to obtain the names of an infected household's laundry, and, at Chorley, to obtain lists of a dairyman's customers. Another clause in the Chorley Act authorises the municipality to supply doctors with antidotes. At Hackney a medical officer may enter a common lodging-house under warrant. There is often a power for the removal from houses of the bodies of persons dying of infectious disease. Sufferers from any grave infectious disorder may be removed to hospital at Bristol without a justices' order if the sufferer or his or her parent or guardian consents. There is a stronger but not entirely novel clause in the Hackney Act for removing a patient certified to be suffering from pulmonary tuberculosis when his existing accommodation is such that proper precautions against the spread of infection cannot be taken, if "thorough inquiry and consideration have shown the necessity in the public interest for the compulsory isolation of the person so suffering." The order of a metropolitan police magistrate is necessary and may be made subject to independent medical examination. Other anti-tuberculosis clauses elsewhere include the disinfection of premises and the special prohibition of handling or cooking food. The Colwyn Bay Act (Section 86) and the Margate Corporation Act (Section 78) have identical provisions for demolition orders in respect of stables or cowsheds where animals are kept, on certificate by the corporation's veterinary surgeon that an infectious or parasitic disease has appeared and that efficient disinfection is not possible.

There are certain novelties in the local Acts of the past year which have a special value as precedents. Bristol has secured a power to make by-laws under Section 157 of the Public Health Act of 1875 for compulsory notification where bathrooms are erected and geysers or other hot-water apparatus installed for the purpose of baths. This will be found in Section 86 of the Bristol Act; Section 87 prohibits the erection of any house, building, or structure in streets not formed or sewered, but allows a right of appeal to the magistrates. Housing and town planning being closely allied to public health, we may also note that the London County Council has obtained a power to extend the 1925 Housing Act in the direction of commercial accommodation. Southend-on-Sea and Margate can now prevent erections on forecourts which mar the local amenities. Eastbourne took a notable step towards acquiring the adjacent downs by compulsory purchase, failing agreement. Newcastle has obtained town-planning powers over lands already developed. Swindon is authorised to set aside parks, gardens, and pleasure-grounds for the exclusive use of boys and girls attending elementary and secondary schools in the borough. In connexion with water-supply it will be found that the Rhymney Valley and Taf Fechan Water Boards are now allowed to make reasonable subscriptions to associations of water authorities and to pay the costs of attendance of members and officers at conferences. The latter Board has been given a new power to impose summary penalties for the breach of any order it may make prohibiting sheep-washing (with or without chemicals) in the area including the Taf and its tributaries and the Board's reservoirs. The local legislation of 1926 does not make much mention of river pollution, but there are occasional references to the protection of fisheries—e.g., to the Dart waters in the Paignton Act, Rumworth reservoir in the Bolton Act, and the Hampshire Conservancy in the West Hampshire Water Act. There is a remarkable clause in Section 9 of the Stoke-on-Trent Act authorising the corporation to contract with the owners and occupiers of factories or other trade works for the supply of sewage effluent. The contracts are to provide that the effluent shall not be used for any other purpose than for condensation or boiler or other factory purposes or for washing coal or coke on the premises of the person supplied. There is mention of the London, Midland and Scottish Railway as a possible purchaser of effluent, apparently in connexion with its canals. By way of safeguard the consent of the Ministry of Health is to be necessary to all contracts, and he may impose conditions to prevent nuisance or danger to health; further, a Factory and Workshops Act inspector may bring offenders before a court of summary jurisdiction. The City of London (Various Powers) Act regulates the discharge of offensive liquids (chemical or trade refuse, waste steam, liquid heated above 110 degrees Fahrenheit, crude petroleum, &c.) into sewers, and has special provisions for waste pipes conveying acids from premises where chemicals are used. The slaughter of animals is prohibited in the City by the same Act. Elsewhere there are clauses against offensive trades in the Acts relating to Bristol, Chorley, Colwyn Bay, and Paignton, and against smoke nuisance in those relating to Bristol, Chorley, Halifax, Margate, and Newcastle-on-Tyne. These localities, together with Guildford, Southend-on-Sea, and the urban district of Mynyddislwyn are some of the principal pioneers of public health in the local legislation of 1926. In many cases local authorities have already shown the way; others, no doubt, will follow.

STREET ACCIDENTS AND INSURANCE AT SHEFFIELD. The Governors of Sheffield Royal Infirmary have decided to relieve the pressure caused by casualties by providing an entirely separate casualty department, and the scheme has been referred to the medical staff for consideration of details. At the meeting at which this decision was taken Mr. R. W. Matthews, who presided, urged that the voluntary hospitals should be given statutory power to recover the cost of insured patients.

DOMESTIC SERVANTS AND CONTRIBUTORY SCHEMES. An endeavour is being made to induce domestic servants in the 250 parishes served by the East Suffolk and Ipswich Hospital to join the contributory scheme which is already in successful operation. It is pointed out that since household servants have not to pay unemployment insurance they are better off than many employed persons; moreover, the Health Insurance Act does not entitle them to free treatment at the hospital. By joining the scheme the full facilities of the hospital would be available to them.

UNIVERSITY COLLEGE, LONDON, AND A STOLEN DOG.

A SUMMONS DISMISSED.

AT Clerkenwell Police-court on Dec. 22nd, 1926, before Mr. Dummett, magistrate, Dr. E. B. Verney, Professor of Pharmacology at University College, London, was summoned on the charge of having in his possession a small mongrel wolfhound, the property of Frederick Smythe, of Doughty-street, W.C., knowing it to have been stolen.

Mr. E. D. Wetton (for the prosecution) said that the summons was under Section 19 of the Larceny Act, 1861. The owner of the dog would give evidence that the dog was safe in his possession on the morning of Nov. 19th, and it was common ground that it was at University College at 12.30 or before without the consent of the owner. He submitted that it was not necessary for him to prove that Prof. Verney received the dog knowing it to have been stolen; it was sufficient to prove that Prof. Verney had good reason to know that the dog was stolen between Nov. 19th and 22nd, and that before it was returned to its rightful owner he remained in possession of the dog, knowing it to have been stolen.

Mr. Frederick Smythe was the first witness examined by Mr. Wetton. He said that he had called at University College on the afternoon of Monday, Nov. 21st, and had seen Prof. Verney, and told him that on the previous Friday, about 11 o'clock, the dog had been stolen from the front door-step. Prof. Verney had then gone to the end of the paved court-yard and unlocked a place and turned up a light, and after a minute or two had come back and said that he was very sorry, but he could not do anything without the Provost (Sir Gregory Foster), and that he would go and see the Provost. When he came back, after some considerable time, he said he was very sorry indeed for all the trouble witness had had and for the long wait, but the Provost had, unfortunately, gone. He asked witness to return on the next morning at 10 o'clock, when he saw the Provost and Prof. Lovatt Evans, as well as Prof. Verney. The Provost said that at about 11.30 on the previous Friday they had received a dog somewhat answering the description, and Prof. Verney brought up the dog, who recognised his master and went away with him.

In answer to Mr. Roland Oliver, K.C., who appeared for Prof. Verney, witness said that he was treated with perfect courtesy by Prof. Verney, who showed every sympathy with his loss. Prof. Verney promised that in the interval between witness's first and second visits to the College nothing should be done with any of the dogs in their possession. Witness admitted that the Provost also had treated him with perfect courtesy, and that before going away with the dog he had signed a statement acknowledging the return of the dog, and had added the words "I desire to thank all concerned for the kind and courteous way I have been treated." He had gone away from that interview perfectly satisfied, and had offered to pay for the dog's keep while it was there.

Mr. Oliver then asked whether the solicitor in this prosecution, Mr. E. Hayes Jones, had been employed by the witness to do any work before this prosecution and the following facts were elicited:—

Witness (answering): No, I have had very little work for a solicitor.

Q.: Did you go to him or did he come to you?

A.: I went to him.

Q.: Who sent you to him?

A.: The British Union for the Abolition of Vivisection.

Q.: And they asked you to go to their solicitor?

A.: I wanted to prosecute, and I considered I had a right to do so. I had not legal help at the first hearing, and I wanted legal help, and I wanted financial help.

Q.: And they very kindly sent their solicitor. I suppose they are paying the costs for you, aren't they?

A.: Yes.

Q.: It does not seem to have much to do with them, does it, whether your dog was stolen or not?

A.: I think so.

Q.: The Society against vivisection?

A.: Yes, I lost my dog, and it was taken there for the purpose of vivisection. I am as dead against it as they are.

Mr. Wetton then called Leonard Shaw, an animal boy at University College, who gave evidence as to the arrival of the dog at the kennels.

Mr. Wetton said that he wanted to tender evidence with regard to a system.

The Magistrate: You have proved description of the dog, and that they went to the kennel and then came back, and Prof. Verney said they could do nothing because the Provost had gone. So far as that indicates anything at all, it indicates that the Provost was the person who was responsible.

Mr. Wetton: Prof. Verney went to the kennel where dogs were kept, lit a light, unlocked the kennel with a key, and came out again; and I ask you to infer that after the interview with Smythe and the description by Smythe, and that Prof. Verney was the person he saw on the 22nd, that Prof. Verney was the person responsible. He gave Prof. Verney a written description of the dog, and Prof. Verney did not then say "No, I cannot do anything until next day"; he went to the compartment where dogs were kept, he lit a light, and remained in the kennel for some time, and then came back and said, "I must see the Provost," and then the next morning the dog was returned.

The Magistrate: The only inference I can draw is that Prof. Verney, desiring to ascertain whether the dog as described was there, went to look, and, assuming that he saw a dog answering the description, he concluded that it was the dog. Still, he came back and said "I have not the power; the Provost is the man."

Mr. Oliver: I do not want it to be thought by anybody that I am contending that there can be no evidence it was stolen; I am very loath it should be suggested that that was the only defence we can have, that Prof. Verney was not in technical possession of the dog.

The Magistrate: I am sitting here as magistrate to do a public duty and to save time where I can; there are other cases to be heard. And if the prosecution fails to satisfy me on the essential points in this section, it is my plain duty to say so at once, and without any reference to the merits of the case on either side.

Mr. Wetton: It is quite clear that on that Monday, Nov. 22nd, the dog was under Prof. Verney's control.

The Magistrate: What evidence is there?

Mr. Wetton: Because Prof. Verney was the person in question. Prof. Verney was brought to him.

The Magistrate: Prof. Verney sees the dog and says something which shows that somebody else had control. If you ask me to say he had it in his possession, I cannot. I cannot prevent your asking me, but it is no good. I dismiss the summons.

Mr. Oliver: You have got discretion, Sir, in the matter of costs, and I ask you for the costs of this action. Here is a case, I submit, where the law has been abused, deliberately abused, not by the poor old gentleman who owns the dog, but in order to attack Prof. Verney. This Society is paying his costs. He has been put up to do this, and I do not take it that the Society will leave the poor old gentleman to foot the bill for this disgraceful prosecution. Being unable to attack the methods of this University College, who carry on experiments under licence and who are in every way absolutely under proper supervision and care, and are thoroughly humane, being unable to attack on the lines they want to attack animal

experiments, they put up this poor old gentleman to be the nominal prosecutor in a case brought in a way which suggests that Prof. Verney has been guilty of receiving stolen property. That is their method of getting at Prof. Verney, and it is an abuse of the process of this Court. It is a perfect scandal that it should have been brought against this gentleman; he is, as a matter of fact, accused of dishonesty. That is their method. I therefore ask you to say, Sir, that on its merits you give my client some expenses. I ask you to say it is not right that this gentleman or the University College shall be put to this trouble to establish what never ought to have been assailed.

Mr. Wetton: So far as the College is concerned, there is a dog which has been stolen, and within half an hour of its being stolen it has found its way to the College, and is admitted to have been under their control by Sir Gregory Foster. It may have to be considered whether we shall have to bring him into Court on a subsequent occasion. The dog is stolen for a short time and it is only by great persistence that this gentleman gets his dog back.

The Magistrate: That is no evidence. It might justify taking action by the owner of the dog. As you say, a dog is taken away at 11 o'clock, and at 11.30 is in possession of University College. One understands that the owner of the dog should feel some resentment and a desire that some investigation should be made, but you are not representing the owner; you are representing a Society which, rightly or wrongly, takes a strong view on the matter of vivisection, and, from the evidence under their consideration, have launched this prosecution. I have no interest in the question whether it is scandalous, but whether it is a prosecution which should have been launched seriously by people with a knowledge of legal procedure on the evidence at their disposal. They must have seen that it must fail, because they had no evidence on the vital point of possession. I am against you on that view. I can quite imagine that Prof. Verney and all the officials very seriously regretted that they should have been dealing with people who bring dogs to the College in that way. It is quite obvious that their view will be that such inquiries as they may make in future will have to be supplemented by further measures to prevent any such scandal as a dog being taken in this way, and I am sure the hospital authorities will strengthen their methods.

Mr. Oliver: The man from whom they bought this dog was the man they had been dealing with for ten years, a man named Travert. He is of very good character, and has never been convicted or suspected of any stealing. He had employed an agent and University College are investigating that source and they are horrified at what has occurred.

The Magistrate: I am glad to hear that, because this dog was obtained by a person in the Caledonian Cattle Market. Whoever stole this dog took it to the Caledonian Cattle Market, and it was purchased by the person who sold it to the Hospital. So I am sure, now the Hospital know that, they will put their house in order.

Mr. Oliver: They have done so, Sir.

The Magistrate: I do not think this prosecution ought to have been brought, because it ought to have been clear that it must fail, on the ground of the information I have had. I shall give only small costs, five guineas costs against the prosecution.

At the close of the case Mr. Oliver remarked that several times the word "hospital" had been used, when obviously it should have been "college"; the two institutions were under separate administration.

JOINT NURSING AND MIDWIVES' COUNCIL (NORTHERN IRELAND).—This Council is about to revise its list of examiners, and invites applications from registered medical practitioners (including women) resident in Northern Ireland who would be willing to act as examiners of midwives. Particulars may be had from the Registrar, 118, Great Victoria-street, Belfast, to whom application should be sent not later than Jan. 15th.

THE TREATMENT OF CORNS.

BY E. G. V. RUNTING.

A CORN has been described by Dr. P. S. Abraham as "a localised tylosis occurring in particular situations where there is intermittent pressure from without and solid resistance from within." It is characteristic of a corn that the keratinous cells are moulded into one or more conical horny points. The impingement of these stunted cones on the sensitive tissue beneath or even directly on a nerve filament or plexus is the immediate cause of pain. These horny indurations may form one or more crescentic shapes conforming to the contour of the bony prominence of a joint. The soft corn is identical in structure. Whereas the hard corn is caused by the direct intermittent pressure of the leather of the boot, the soft corn is induced by indirect intermittent pressure through one toe on another, skin being in direct contact with skin. The condition of the skin is relaxed through deficient evaporation of sweat and heat and moisture and reduces it to a sodden or macerated state. Soft corns are often characterised by ring-like indurations round the edges, which are the most concentrated part of the growth.

It is peculiar to chronic growths of this type that the tissue immediately beneath the apex of the corn is subject to morphological change as a consequence of nature's effort to modify the pressure at this point by creating a sort of sac or adventitious bursa. When this structure exists it has an important influence on the redevelopment of a corn after treatment should this not be adequate. The bursa is particularly evident in, although not confined to, soft corns.

Prophylaxis.

Prophylactic and remedial measures entail consideration of the shape and length of the boot or shoe. A straight inner line for the great toe is very important, while sufficient upper leather to give room for the toes to extend is essential. Measurement taken while the person is sitting is misleading, for that position does not allow for the elongation of the foot when standing and walking. The shank should fit well up into the arch from the heel to immediately behind the metatarsal heads. The stocking should have some cushioning properties; some fine silk stockings are made with woollen feet and should be worn by those who tend to suffer from corns in preference to those with silk or cotton feet. Coarse or too hard threads should be avoided; the coarse seams so often found even in expensive stockings may be sufficient to produce corns, especially in children. The habit of wearing two pairs of socks or stockings in winter needs careful supervision, since it is often the cause of trouble from induced toe flexion. The effects of the occlusion of air when patent leather and rubber shoes are worn may be detrimental: nor does the frequent soaking of the feet in hot water, which is a habit far too prevalent, have a beneficial effect on feet subject to corns. There are some patients who persist in following the dictates of fashion and refuse to alter their type of footwear, even if it is obviously faulty. These patients in whom the disorganisation of the skeletal contour is often beyond correction can be relieved only by the regular attention of those trained in manipulation of neglected conditions of the feet.

Applications.

Advertised remedies for corns usually contain in some form preparation of the active principle of salicylic acid; this is applied either in an ointment, plaster, or collodion solution, and with it is generally combined a small quantity of cannabis indica, added for its anodyne effect, although creosote is sometimes used for this purpose. There is no doubt that exfoliation of the callous tissue can be brought about by preparations of this description if they are used in sufficient quantity to impregnate the growth. The

chief danger in their use would seem to be injudicious and excessive application, especially where they are not confined strictly to the growth. They do not, as a rule, separate the more organised apex of the chronic corn.

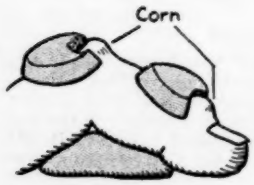
Another popular remedy is the corn ring made of felt spread with isinglass or the more tenacious zinc oxide or rubber adhesive. The corn-ring often acts successfully as a temporary remedy, but, since it compresses the growth on all sides, is apt eventually to concentrate the centre of the growth so as to make it more painful than before. This is less likely to occur when the anterior portion of the ring is thinned, leaving the proximal half as the protection. In some forms the ring plaster has a salicylic disc placed in the cavity to cover the corn; this has the advantage of localising the action of the acid.

Operative Methods.

The foot or toe should be properly cleansed and then painted well with tinct. iodi mitis, which does not necessarily obscure the working; alternatively lint saturated with a 1 in 20 or 1 in 40 aqueous solution of carbolic acid may be applied in close contact with the field of operation for at least five minutes before working. The last-named procedure is useful as it tends to lessen surface sensibility.

Some chiropodists practise removing the corn in its entirety by the use of mouse-tooth forceps and scalpel, but this method is not very popular in Great Britain, where the general practice is to pare away the surface

FIG. 1.



Showing pads and prop in position.

(The figures are from "Practical Chiropody," The Scientific Press, Ltd.)

FIG. 2.

Showing centre pad in position and the metatarsal strapping used to correct lateral spread.

and excavate the corn even to its minute nucleus: this cannot always be managed at one operation, but it can be mostly done by the skilled manipulator who pays particular attention to making tense the soft tissues with the fingers of his left hand so that there is no impingement or drag on the surrounding sensitive tissue. Lightness of touch is essential.

After the complete enucleation of the corn the operator gives his attention to restoring the tissue to its normal condition. Here two essentials must be observed; first, any semblance of a bursal sac must be enucleated, and the papillæ must be induced to resume their normal form. The latter condition may be brought about by the use of a nitrate of silver solution (25 per cent.), by compound tincture of benzoin or balsam of Peru. Another essential is the removal of the cause of the trouble. Corns usually form upon the prominences of the foot more directly in contact with the shoe. As a rule this is due to malalignment with flexion of the toes, which often is accompanied by lateral spread and possibly misplacement of the metatarsal bones. It is quite possible, where the ligaments and tendons of the toes will allow them to be straightened, to correct this spread by judicious padding. A carefully adapted prop placed underneath the toe so as slightly to lift the distal and second phalanges, with a crescent-shaped pad placed on the dorsi-proximal aspect (see Fig. 1), will often have a straightening effect as well as providing protection to a flexed toe. It is hardly necessary to point out that unless this padding is done skilfully it may damage rather than help the condition, but in many cases where feet have spread laterally a carefully adjusted strap round the metatarsal bones has been beneficial in restoring alignment (Fig. 2).

Radical excision of the growth has been successfully performed by surgeons, but following this operation there have been occasional cases when minute corns have formed on the cicatrix, which have caused pain as intense as that produced by the original growth.

Seed-Corns.

A peculiar type of corn which is often found in persons with very dry skins consists of small nuclei about the size of a millet seed. These corns are usually multiple and may be distributed more or less uniformly over any part of the plantar surface of the foot. They occur virtually irrespective of pressure and are found especially in people of mature age. Sometimes small crystalline bodies may be found involved in the nuclei. The heel and plantar arch are often the principal seat of this particular trouble. These growths can be picked out individually, but the use of a mild salicylic plaster (5 per cent.) covering the whole area for three or four days prior to operation greatly facilitates removal.

Verrucæ.

A type of growth which has something in common with, and is often mistaken for, an ordinary corn is a pathological condition of the prickle-cell layer known as verrucæ. These pedic warts are most commonly found in growing children, but I have noticed that during and since the war many more adults have been subject to this trouble which, on the foot, is a source of great pain. These warts are infectious, but I have found that the successful cure of one attack of verrucæ of the foot produces immunity from others for many years, if not permanently. Trauma is one of the factors in producing these formations; they mostly grow on the fleshy parts of the foot, such as the plantar surface of the metatarso-phalangeal region and on the same area of the heel, but they may occur in other parts of the foot and are occasionally met with on the dorsum of the joints in the usual position of ordinary corns, at the apex of the toes, or even under the edges of the nails. When the surface is cleared away by paring there is disclosed a spongy growth which shows the ends of elongated papillæ combined with soft cells. As a consequence of the rapid proliferation of the cells of the rete Malpighii the papillæ are so crowded by this accumulation that they become attenuated and squeezed upward and downward, their capillaries being often obliterated, though not always, since, when the growth is pared, there may be slight hæmorrhage from its centre. The sponge-like surface may be dotted here and there with small dark-red or blackish stains, and the growth has a rubber-like consistency. There is usually a history of throbbing pain, especially on lowering the foot to the ground after a night's rest, on putting on a boot in the morning, and on immersion of the foot in hot water. After the boot has been worn for some time the pain may get better. Surgeons treat these cases by excision, radium, or X rays. Chiropodists sometimes apply the minor forms of electricity if trained in its use; most of them use chemical escharotics such as nitric, monochloracetic, trichloracetic, pyrogallic, chromic, or salicylic acids. When treating these cases the chiropodist makes a point of using removable pads judiciously adjusted in order to obviate any direct pressure.

CENTRAL ASSOCIATION FOR MENTAL WELFARE.—A special ten weeks' course for teachers of mentally defective and of dull and backward children is to be held in London from May 2nd to July 9th under the direction of Miss Lucy Fildes. Copies of the prospectus may be had from the offices of the Association at 24, Buckingham Palace-road, London, S.W. 1.

Correspondence.

"Audi alteram partem."

ADOLESCENT ALBUMINURIA.

To the Editor of THE LANCET.

SIR,—Dr. H. H. Bashford's article in your last week's issue raises several interesting points, and it supports the current medical teaching as to the significance of adolescent albuminuria as illustrated by patients whom he has observed for 7 to 14 years. The condition under discussion is that of albuminuria occurring in young adults unaccompanied by any other signs of renal or constitutional disability. I would emphasise the importance of Dr. Bashford's opinion that "those cases in which albumin is consistently found in the after-rest specimen ought certainly to be regarded more stringently" than those in which the after-rest specimen is albumin-free. The opinion, thus expressed, is more conservative than is the statement in his fourth conclusion, "That in the great majority of cases the after-rest specimen is usually free from albumin."

I believe that the presence of albumin in the after-rest specimen distinguishes certain cases which might otherwise be diagnosed as suffering from adolescent or functional albuminuria; and I believe that in some of these cases the albuminuria is an expression of irritation of the renal parenchyma by bacterial toxins. They come properly, therefore, under the heading of toxæmic kidney. I think that I have seen albuminuria as the sole expression of abdominal tuberculous adenitis, and I believe that focal sepsis, such as occurs in chronic tonsillitis, is responsible for albuminuria in others. In these patients there has been a trace or faint trace of albumin in the after-rest specimen, but no cells or casts or other evidence in the present condition or past history to indicate renal or constitutional disability. These cases occupy an intermediate position clinically between functional albuminuria and Bright's disease.

I am, Sir, yours faithfully,

GEOFFREY EVANS.

Park-square East, London, N.W., Dec. 27th, 1926.

THE INCUBATION PERIOD OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—We have in Plymouth a residential hostel for children, who are "contacts" in tuberculous families but are apparently healthy. The evidence afforded by the 20 years' work in France of Grancher, and more recently of Léon Bernard, Calmette, and others, confirms my own experience, as tuberculosis officer in Plymouth, of the frequency of "personal" infection. Under our national system of tuberculosis schemes we have a regular examination of all "contacts," and it is difficult to understand why public health committees do not more often permit tuberculosis officers to send selected cases to such hostels or to board them out, thus minimising the risk of infection of the coming generation which arises from intimate association with "open" or advanced tuberculosis in overcrowded premises. My immediate object in writing is to obtain, if possible, reliable statistics of the incubation period or periods of pulmonary and other forms of tuberculosis in man and animals. The periods may vary, as far as my notes of cases show, with the type of tuberculosis, with the organs, systems, or structures involved (e.g., a few weeks in the meninges, many months or years in the lungs and the joints), and with age and sex. Such variability in the periods between primary infection and clinical manifestation is, of course, common to many bacterial diseases, such as leprosy. I should be content with obtaining approximate statistics which may assist those who are attempting to educate the public in this important preventive measure. I am, Sir, yours faithfully,

F. G. BUSHNELL, M.D., C.C.

Plymouth, Dec. 24th, 1926.

PASTEURISATION OF MILK.

To the Editor of THE LANCET.

SIR,—The recent correspondence under this heading in your columns did not exhaust the question of the effect of heat upon milk, to which I should like to return. Various speakers at the National Milk Conference held in November last seemed to think that clean milk from tested herds must necessarily be an expensive article, and that all milk that was not produced from tubercle-free herds must be pasteurised. If these assumptions are true, then it necessarily follows that the milk-supply in our large centres of population will be reduced to the position of those found in New York—namely, 2 per cent. of the supply is Certified Milk sold at a price which makes it a fancy article and 98 per cent. is pasteurised. In England, on the other hand, it is possible to sell Grade A (tuberculin-tested) milk in our provincial towns at a price which is not more than 1*d.* a quart higher than that of ordinary milk, and in the poorest parts of London at a price which is not more than 2*d.* a quart above the price of ordinary milk.

There remains the question, whether or not it is advisable that the people of this country shall admit that the pasteurisation of milk is the true remedy for the difficulties of the milk industry, as was constantly suggested at the conference, or whether, as a nation, we should not press forward to the true goal—namely, the provision of a fresh, clean milk free from disease, at a price which the consumer can pay. Such a policy is undoubtedly in the best interests of the farmers. It is also in the best interests of the consumers. The answer to this question is closely linked up with that of the true food value of fresh and heated milk.

A study of the work that has been carried out in recent years reveals certain facts which should be given grave consideration before a policy, from which it will be very difficult to retire, is adopted. In considering this work it is important to remember that many of the problems connected with milk as the ideal food are complicated by the fact that no two human frames react equally; thus, in the experiments on the vitamins one is faced by the fact that vitamins are stored in the body, and the number of months a child will flourish on that store will vary within a wide range. The difficulty, therefore, in assessing the true value of vitamins in milk and the amount of destruction by heat can be appreciated. That there is a danger of widespread pasteurisation affecting the health of children cannot be denied after reading Dr. E. A. Barton's paper in the *Journal of State Medicine* (1922) or the article by Prof. E. Widmark in THE LANCET of 1924, i., 1206. The latter drew attention to the widespread outbreak of xerophthalmia that occurred in Denmark owing to the excessive export of butter that took place from economic causes during and after the Great War. J. H. Hess, in his work on "Scurvy Past and Present," shows that definite outbreaks of scurvy occurred in Berlin in 1901, when large pasteurisation plants were established, and again when homogenised milk came into use in Switzerland and France.

As Barton pointed out, the diminished supply of vitamin from pasteurised milk can be made good by outside factors—e.g., fruit, cod-liver oil, &c.—but unfortunately all mothers have not the means or the opportunity thus to supplement their children's diet. In any event there is no evidence that these additions replace the alterations in the relationship between diffusible and non-diffusible lime salts which takes place on the heating of milk. Much valuable work is now being done on this question. Its importance to the growing child must not be overlooked, as it may have an appreciable effect upon the satisfactory formation of the bones, and upon the calcium content of the blood. H. E. Magee and Harvey, of the Rowett Research Institute, have shown that the calcium in milk is in two forms, one soluble or ionised, and the other organically bound up with caseinogen in the form of a protein salt. They further show that

the percentage of diffusible CaO present in fresh milk is 26·4 per cent., in pasteurised milk (i.e., milk held at 70° C. for 30 minutes) is 20·4 per cent., and in boiled milk (i.e., a flask of milk immersed in a water-bath at boiling-point for one hour) is 15·7 per cent.

Dr. A. T. R. Mattick has kindly permitted me to make use of as yet unpublished details of work which is being carried out on the effect of heat on the diffusible calcium of milk. A long series of experiments has been carried out at temperatures which ranged from 105° to 210° F. In each experiment the milk was held at a temperature which did not vary more than 5 degrees. In every case the amount of diffusible calcium was diminished and the coagulation time of the heated milk when treated with rennet was prolonged as the temperature rose, until at a temperature of 205° to 209° F. no true coagulation took place. In New York an investigation by W. S. Ladd, Ewarts, and Franks on the relative efficiency of Certified and pasteurised milk for infant feeding was made. It was found that Certified raw milk alone without the addition of orange-juice or cod-liver oil produced a greater increase of body-weight in babies than did pasteurised milk alone or when pasteurised milk was combined with orange-juice and cod-liver oil. The table is as follows:—

—	No. of months observed.	Weight development—		
		At entrance.	At one year.	Gain in percentage.
		Per cent.	Per cent.	Per cent.
Group I. (61 cases) .. Grade A pasteurised Cod-liver oil 0 Orange juice 0	6·9	82·1	83·8	1·7
Group II. (59 cases).. Grade A pasteurised Cod-liver oil 0 Orange juice +	7·2	82·2	90·1	7·9
Group III. (72 cases). Grade A pasteurised Cod-liver oil + Orange juice +	7·0	80·2	89·7	9·5
Group IV. (17 cases).. Certified milk, raw Cod-liver oil 0 Orange juice 0	6·8	80·9	94·0	14·0

This table shows that the normal development of the babies as judged by weight increased 14 per cent. on Certified raw milk against 1·7 per cent. on pasteurised milk alone, 7·9 per cent. on pasteurised milk with the addition of orange-juice, and 9·5 per cent. on pasteurised milk with the addition of orange-juice and cod-liver oil. A. L. Daniels and G. Stearns, of the Iowa Child Welfare Research Centre, found that in experiments on rats, that when the rats were fed on pasteurised milk their growth was half the normal. According to them this was due to the precipitation of calcium, the calcium adhering to the sides of the vessel in which the milk was pasteurised. If, however, the vessel was washed after the milk had been poured out, and the washings added to the milk, then the growth of the rats was normal. In the Iowa Welfare Centre it was found that babies fed on pasteurised milk (milk held at 145° F. for 30 minutes) did not increase in weight. This was found to be again due to the loss of diffusible calcium in the pasteurised milk. This was proved by the fact that the stools of the babies fed on pasteurised milk contained more total calcium than those fed on milk that had been heated to 145° F. and then immediately cooled.

From the above few observations it may be acknowledged that the pasteurisation of milk is not ideal and that the indiscriminate use of pasteurised milk by the great majority of the population is not to be recommended.

I am, Sir, yours faithfully,

C. MADDOCK, C.I.E., M.D.,
Lieut.-Col., I.M.S. (ret.); Hon. Sec., Grade A (Tuberculin Tested) Milk Producers' Association.

THE PRACTICE OF PATHOLOGY.

To the Editor of THE LANCET.

SIR,—May we draw attention to the fact that a meeting will be held at the London School of Medicine for Women at 2.30 P.M. on Friday, Jan. 7th, for the purpose of considering the advisability of forming a society to represent the interests of those engaged in the practice of pathology?

There is general agreement among those engaged therein that the conditions of pathological practice throughout the country are very unsatisfactory, and are in danger of becoming more so. The competition for pathological work on the part of subsidised institutions of various sorts, both academic and commercial, and of local authorities, and the resultant cutting of fees, is threatening to reduce the remuneration from pathological work to such an extent that little inducement will be offered to competent men to enter this important branch of medical practice. The present state of pathological practice, moreover, offers little encouragement to non-teaching hospitals to attempt to bring their pathological departments to a state of efficiency. It is in the general interest of medicine that pathological knowledge should be as widespread as possible, and not confined to the teaching centres.

Up to the present pathologists as a class have had no organisation to represent their interests. The need for such a body appears to be urgent, and we, therefore, hope that all those interested who can manage to do so will attend the meeting.

We are, Sir, yours faithfully,

H. A. COOKSON,
Royal Infirmary, Sunderland.

J. B. DAVEY,
General Hospital, Cheltenham.

S. C. DYKE,
Wolverhampton and Staffordshire Hospital, Wolverhampton.

C. E. JENKINS,
Salford Royal Hospital, Salford.

C. POWELL WHITE,
Victoria University, Manchester.

A. RENSHAW,
Ancoats Hospital, Manchester.

A. G. SHERA,
Princess Alice Memorial Hospital, Eastbourne.

A. F. S. SLADDEN,
General Hospital, Swansea.

R. V. SOLLY,
Royal Devon and Exeter Hospital, Exeter.

E. WORDLEY,
South Devon and East Cornwall Hospital, Plymouth.

A. F. WRIGHT,
Coventry and Warwickshire Hospital, Coventry.

Dec. 21st, 1926.

MEDICINE OR SURGERY FOR THE OCULIST?

To the Editor of THE LANCET.

SIR,—"Incipiens," in his letter of Dec. 4th, has taken the wrong point of view. It is not a question of what form of education would be best for an oculist or best for ophthalmology, but what form of test shall be applied to reduce the number of would-be oculists.

It is useless to argue that a medical education is more suitable for an oculist than a purely surgical one, or that the ophthalmic problems awaiting solution are mainly medical. The hospital appointments are few, and it is obvious that some test must be introduced to keep the numbers of applicants within bounds. The attempt to settle the question on the merits and attainments of the applicants would be much too onerous a labour for any medical committee. For it matters not what the applicant's ophthalmic qualifications may be; if he have not the Fellowship the merest tyro in ophthalmology with the Fellowship will get the appointment before him.

The tragedy is that men are encouraged to take up ophthalmology in order to obtain their services as clinical assistants and house surgeons, and then, no matter what their attainments, their further progress is debarred, not by an examination in ophthalmology, but by a purely surgical examination. Surely it is time that the whole question of hospital appointments, not only in ophthalmic hospitals, but in other specialties, should be reconsidered. The distinction between medicine and surgery in any specialty is artificial and detrimental to its best interests, but to debar men of proved ability by an examination test is the height of injustice.

The insistence on the Fellowship as an essential to an ophthalmic post is injurious to ophthalmology, and deprives London of some of the best men.

I am, Sir, yours faithfully,

Dec. 20th, 1926. RESPICIENS.

LOSS OF MEMORY.

To the Editor of THE LANCET.

SIR,—In your leading article of Dec. 25th, 1926, you refer to Dickens's story of Dr. Manette. It is of interest to note that Spinoza (whose anticipation of modern psychological theories is, in many instances, remarkable) relates the case of a Spanish poet who, as the result of an illness, suffered from what we should term a dissociation of personality ("Ethica," Part IV., Prop. 39, Scholium). It seems probable that such a dissociation of personality, due to a break in the continuity of consciousness, may be the cause of the change of character which so often follows an attack of encephalitis lethargica.

I am, Sir, yours faithfully,

Birmingham, Dec. 27th, 1926. M. HAMBLIN SMITH.

TUBERCULOSIS OF THE KIDNEY.

To the Editor of THE LANCET.

SIR,—With reference to the article by Mr. White and your leading article on the same subject, I think it is important to point out (1) that operation is not necessary to make a diagnosis of hidden tuberculosis of the kidney, such cases can be diagnosed quite easily by tuberculin reactions and cured with tuberculin alone; (2) when the disease is open there is nearly always a mixed infection and it is absolutely essential to treat this with an autogenous antigen. If I am not mistaken as to the case referred to by Mr. Pringle and Sir W. Taylor, he had both a *B. coli* and a *Staphylococcus aureus* infection for which a mixed antigen was used.

In my experience it is only rarely that these cases call for surgical interference—e.g., if there is a perirenal abscess which must be drained or when in a unilateral case the kidney has become completely disorganised. With our present resources of diagnosis and treatment such cases should not occur.

I am, Sir, yours faithfully,

W. M. CROFTON.

Laboratory of Special Pathology, University College, Dublin, Dec. 28th, 1926.

DONATIONS AND BEQUESTS.—Under the will of the late Miss Fanny Sarai Longman, of Cliveden-terrace, Eaton-square, S.W., the testatrix left £1000 each to the Chelsea Hospital for Women, the Disabled Soldiers' Hospital, Richmond, the National Institute for the Blind, St. Dunstan's Hostel, the British Red Cross Society, the Hospital Sunday Fund, and the Church Army; £300 to Dr. Barnardo's Homes; £200 each to the Infant Asylum, Wanstead, the Royal London Ophthalmic Hospital, the Great Ormond-street Hospital for Children, the School for the Indigent Blind, Leatherhead, the Church of England Waifs and Strays Society, Queen Charlotte's Hospital, Marylebone-road, the Cripples' Home, Marylebone-road, the Hospital for Women, Soho, the National Lifeboat Institution, the Royal Hospital for Incurables, Putney, St. Giles' Christian Mission, the Earlswood Asylum, the Royal Albert Orphan Asylum, the Cancer Hospital, Fulham, the Hospital for Consumption, Brompton, the Hostel of God—Free House for Dying, Clapham Common, the City of London and West London Dispensary, the Miller Hospital, Greenwich, the Royal Asylum of St. Anne's Society, the Society for the Prevention of Cruelty to Animals, and the London City Mission.

Obituary.

JOSEPH EBENEZER ADAMS, M.S. LOND., F.R.C.S. ENG.

THE death of Mr. Joseph Adams on Dec. 21st removes a London surgeon whose qualities were justly respected. He gave loyal service to St. Thomas's Hospital and to the East London Hospital for Children, and his premature death will be generally regretted by those who worked with him.

Born in 1878, Joseph Adams was the fifth son of William Adams, who was a City merchant. He was educated at the City of London School, and won a scholarship at St Thomas's Hospital, where he soon made his mark as a student. He qualified in 1902, and became a Fellow of the Royal College of Surgeons a couple of years later. From 1905 until 1909 he held the post of surgical registrar and resident assistant surgeon at St. Thomas's Hospital, and soon afterwards he was elected surgeon to the East London Hospital for Children, Shadwell; at the time of his death Mr. Adams was senior surgeon to this institution, in which he took a great interest. In 1913 he was appointed assistant surgeon to St. Thomas's

MR. J. E. ADAMS.

Hospital, and in the same year delivered a Hunterian lecture,[1] on peritoneal adhesions, to the Royal College of Surgeons. This described some of the experimental work which he had already begun and which was to continue until his death. Most of his research was devoted to abdominal conditions, and it always showed the thoroughness and attention to detail which were characteristic of him. Not long before the war, in collaboration with Dr. M. A. Cassidy, he wrote a book on acute abdominal diseases, and this he subsequently revised and enlarged, so that it became a valuable text-book for students. A second Hunterian lecture, given at the Royal College of Surgeons last year, contained further results of his investigations of the abdomen and dealt with the surgery of the jejunum. He was interested, however, in many other branches of surgery, and will be remembered for his advocacy of wider education of the public concerning the nature and control of cancer. He did not feel certain that the medical profession was doing all that

[1] THE LANCET, 1913, i., 663.

might be expected to combat the disease. "Personally," he once said, "I would rather spend my time reassuring patients who have not got cancer than operating on those who have," and he thought that more money should be spent on propaganda, "so that the sick person shall no longer attribute to the hand of God what is probably due to the carelessness of man."[2] He was often to be seen at meetings of the Association of Surgeons, of which he was an original member, and of the surgical and other sections of the Royal Society of Medicine. His opinions were always given clearly, concisely, and to the point—whether at meetings of societies or in his contributions to medical journals. The same care and deliberation were apparent in his operative work as in his writing, for they were a part of his personality. He was enthusiastic about teaching at St. Thomas's, and his own clear thinking allowed him to present his subject in a logical manner. His qualities as a man were obvious. "Adams never shirked his hospital work," writes a colleague. "He was a man of character with high ideals and he considered that the training of his house surgeons and his dressers was a duty not to be lightly undertaken. . . . All through his life absolute straight dealing and integrity were the dominating features of his character. In the early days when he was resident assistant surgeon he was looked up to and trusted by College House. It would have been impossible for Adams to do a mean or crooked action. He was generous both in his thoughts and actions, a characteristic which was never paraded, for, being a sensitive and reserved man, he sometimes cloaked his real feelings under a veil of sarcasm. . . . His tragic death at the early age of 48 is a real loss to the profession, to the hospitals at which he worked, and to his friends."

Mr. Adams often carried on his work under considerable physical disability which proved due to a congenital diaphragmatic hernia. Symptoms arose from it which prevented his serving overseas during the late war, and he is said to have felt the restriction keenly. As a student he played cricket for St. Thomas's, and later he took up golf; but in the latter part of his life his favourite recreation was to visit his cottage at Penshurst, where he gardened enthusiastically, and nothing gave him greater pleasure than to get his friends and his students to go with him. Mr. Adams married, in 1913, Muriel, youngest daughter of the late Mr. Harry Webb, of Chislehurst, and she survives him.

THOMAS S. PIGG STRANGEWAYS, M.A. CAMB., M.R.C.S. ENG.

WE have to record that Dr. T. S. P. Strangeways died on Dec. 23rd at Cambridge, where he was lecturer on special pathology in the University. Originally named Strangeways Pigg, he received his medical education at St. Bartholomew's Hospital in the early nineties of last century. Even as a student he suffered from a degree of deafness which would have deterred most men from attempting a medical career, and this disability, together with his retiring character, was doubtless the reason why he attracted little notice as a student. He gained, however, one hospital distinction—namely, the Matthews Duncan gold medal in obstetrics—which was awarded to him in 1896. In the same year he took the examination of the Conjoint Board, never having aimed at a University degree. It was probably the most fortunate circumstance in his life that just at this period he came under the influence of A. A. Kanthack, then recently appointed lecturer on pathology at St. Bartholomew's. Kanthack had a good eye for ability, and he recognised in this quiet and unassuming student capacities which had escaped the notice of others—a notable keenness and a great power for hard work. Strangeways was made junior curator of the museum at the hospital, and worked under Kanthack until early in 1897, when the latter was called to the chair of pathology at Cambridge. Not many months had elapsed before Strangeways followed Kanthack to the University to act as his demonstrator. The time that followed was the happiest period of his life. He could never have succeeded in general practice owing to his deafness, but this affliction was little bar to teaching and none to research. He settled down in Cambridge to a steady career of teaching and laboratory work in which his abilities found full scope, and he soon became a well-established figure in the Cambridge Medical School. At the beginning of this century pathology was not yet divided up into the several compartments which we see to-day. Strangeways taught morbid anatomy and histology, bacteriology, and clinical pathology. He was an excellent and popular teacher, in spite of a certain brusqueness of manner; he got to know his men and he remembered them in after life; they responded by developing a real affection for him. For the use of his classes he prepared a small laboratory handbook which ran through seven editions. When the Cambridge Research Hospital was founded, largely through his own efforts, Strangeways naturally became its director, and carried on his extensive research without any material cessation of his teaching work. The subject chosen for investigation at the new hospital was chronic arthritis, and into its study Strangeways threw himself for many years with eager enthusiasm. It was hoped that the intensive scientific examination of this confused and protean condition would lead to the solution of some at least of the many problems of its causation and treatment. Strangeways and his colleagues did indeed learn much of the disease and arrived at a certain classification; they summarised their conclusions in a series of 48 categorical statements,[3] but it was certainly a disappointment that the great amount of labour devoted to the subject did not prove more fruitful.

DR. STRANGEWAYS.

For the last few years of his life Strangeways turned to a new study—the study of tissue culture. Here he attained results commensurate with his efforts, and became perhaps the leading exponent in this country of the delicate technique required; those who saw the preparations—illustrating the development of the limb bud and of the eye in vitro—shown during the past two years at the Royal Society, realised what a master of the art he had become. During these last years he had collected around him five whole-time workers at Cambridge and was associated also with a team of workers at St. Bartholomew's Hospital who were engaged in the study of the action of radium and X rays on living cells, for which he provided all the tissue cultures needed. The fruits of this combined research have been in part published, but much remains to be done.

Strangeways died in harness, going straight from the laboratory to his last sickbed. By a curious irony the last lecture which he ever delivered was on Death and Immortality, and he illustrated it by a preparation bearing marvellous witness to his technical skill—a living culture of tissue made from a sausage purchased in the town.

During the late war he acted for the War Office as Government inspector of pathological laboratories. He married a daughter of the late Edward Anthony Beck, master of Trinity Hall, Cambridge, and leaves his widow with seven children.

[2] THE LANCET, 1922, ii., 639.

[3] THE LANCET, 1918, ii., 621.

Medical News.

UNIVERSITY OF OXFORD.—At recent examinations the following candidates were successful in the undermentioned subjects of the examination for medical and surgical degrees :—

Medicine, Surgery, and Obstetrics.—Grace Batten, Rosaleen L. Graves, Michael D. Bower, Clarence S. Broadbent, John G. A. Davel, Cecil W. Flemming, Leslie O. F. Fysh, Arthur H. Gale, Charles L. Harding, Reginald A. Haythornthwaite, Richard C. Hodges, Otto Hooper, Charles W. Hope-Gill, Robert Illingworth, Thomas M. Ling, George E. Macdonald, Robert G. MacGregor, Charles W. Mackenzie, Patrick C. Mallam, Frederick G. Parker, William F. H. Ray, William D. B. Read, Douglas A. Robertson, and Edward M. Wright.

Forensic Medicine and Public Health.—Grace Batten, Lewis W. H. Bertie, W. H. Brown, Richard T. V. Clarke, Cuthbert L. Cope, John G. A. Davel, Cecil W. Flemming, Leslie O. F. Fysh, Arthur H. Gale, Otto Hooper, Charles W. Hope-Gill, Robert Illingworth, George L. M. Inkster, George E. Macdonald, Robert G. MacGregor, Charles W. Mackenzie, Robert C. Probyn-Williams, Jack W. Pugh, William F. H. Ray, and Douglas A. Robertson.

Pathology.—Henry H. Aitchison, Albert R. Bowtell, Harold A. Byworth, George Campbell, Charles F. J. Cropper, John G. A. Davel, Charles R. Greene, Richard M. J. Harper, George E. Macdonald, John K. Marshall, Malcolm G. Pearson, Lindsay T. Ride, and Hill G. Wells.

Materia Medica.—Florence H. Johnson, Caroline E. MacNeice, Albert R. Bowtell, Charles F. J. Cropper, Richard C. Hodges, Albert P. Kingsley, Ronald Nutt, Hedley G. Pritchard, Eric E. Swaby, Llewelyn H. Thomas, and John W. de W. G. Thornton.

UNIVERSITY OF CAMBRIDGE.—At recent examinations the following candidates satisfied the examiners in the undermentioned subjects :—

THIRD EXAMINATION FOR DEGREE OF M.B., B.CH.

Part I., Surgery, Midwifery, and Gynæcology.—I. Caley, G. M. B. Morgan, K. A. Muir, C. J. Ormerod, R. G. Apthorpe, E. S. Bolton, H. T. Cox, A. T. Curnow, R. D. Curran, K. E. D. Dauncey, A. A. Digges La Touche, M. G. Fitzgerald, F. H. Gillett, H. K. Goadby, F. Goldby, V. C. J. Harris, J. A. Hartley, A. S. Hollins, F. S. Hubbersty, C. E. Kellett, F. Kellett, R. L. Lancaster, C. J. Laviers, R. M. B. MacKenna, B. W. S. Mackenzie, T. F. McNair Scott, S. R. Matthews, G. C. Milner, E. A. Nicoll, C. L. Owen, G. E. Parker, R. Pearce, R. A. Phillips, C. L. Potts, L. W. Proger, W. P. Purvis, J. H. Randall, D. N. Rocyn-Jones, R. P. Ross, N. L. Russell, H. W. Sadlier, E. M. Shackel, L. A. P. Slinger, H. Smith, W. E. Snell, J. F. Stent, C. I. Tuckett, S. Tyagaraja, C. W. Walker, R. Watson, C. G. Windsor, and C. E. Woodrow.

Part II., Physic, Pathology, and Pharmacology.—M. G. P. Reed, D. S. Tait, A. Barnsley, P. G. Bentlif, B. H. Burns, G. P. Chandler, A. B. Connell, J. W. E. Cory, F. M. Deighton, M. S. Dewhurst, H. M. Elliott, R. W. B. Ellis, V. H. Ellis, H. W. Gordon, E. J. Greenwood, J. C. P. Grey, T. L. Griffiths, W. S. Grove, C. H. Hilliard, A. J. Johnson, F. W. Law, A. V. Mackenzie, B. W. S. Mackenzie, R. Marnham, J. G. Milner, J. W. Monro, J. L. Morgan, J. Morris, R. T. Mummery, H. E. Nourse, G. E. Parker, C. P. Pinckney, C. G. E. Plumstead, J. D. Procter, J. H. Randall, D. Riley, F. C. Roles, C. J. L. Sharp, D. G. Shields, W. E. Snell, G. F. Taylor, and F. H. A. Walker.

UNIVERSITY OF DURHAM.—At the Convocation held on Dec. 18th the following degrees and diplomas were conferred :—

DOCTOR OF MEDICINE.

Alexander P. Cawadias and Edward R. Griffiths.

MASTER OF SURGERY.

Robson C. Brown.

BACHELOR OF MEDICINE AND SURGERY.

Leonard Barber, Ethel Browell, Samuel Carnofsky, William A. Carruthers, Robert R. Dodd, Douglas Ewart, Lawrence Livingston, Milton A. S. Margai, Arthur T. H. Marsden, Henry O. Martin, Ernest H. Moseley, Julius Niman, Hugh O'Connor, Ronald Russell, Alys L. G. Simpson, Ralph B. S. Smith, Norman Spark, Ernest P. Tulloh, James H. Weir, and Frederick Young.

BACHELOR OF HYGIENE.

Doris H. Motyer, Patrick J. O'Connell, and Ralph F. Tredre.

DIPLOMA IN PUBLIC HEALTH.

Doris H. Motyer, Patrick J. O'Connell, and Ralph F. Tredre.

LICENCE IN DENTAL SURGERY.

Sidney Craven.

UNIVERSITY OF LEEDS.—At recent examinations the following candidates were approved :—

M.D.

J. Cardis, A. M. Claye, and F. W. M. Greaves.

FINAL EXAMINATION FOR M.B., CH.B.

Part I.—F. V. Allen, S. Bregman, L. Brill, J. W. L. Crosfill, H. W. Davis, J. Donovan, L. B. Flather, S. K. Foster, L. Godlove, Dorothy Halstead, P. Hampshire, R. C. Hanson, L. B. Heseltine, H. Hopkinson, J. H. Khan, Esther M. Killick, W. E. L. Lawson, J. Leibermann, J. O'Donnell, T. L. Owen, N. Pyecroft, R. J. H. Raines, D. R. Riddell, Doreen M. Robertshaw, A. C. Shuttleworth, L. Silman, V. P. Squire, J. O. Terry, and J. E. H. West.

Part II.—Mary Lightowler, W. Milligan, A. L. Mitchell, A. Shufleder, R. P. Viret, and J. Walker.

Part III.—Rosie B. Becker, I. Berenblum, I. D. Black, T. H. Carr, G. F. Dimmock, J. S. Dinsdale, H. G. Garland (distinction in medicine), R. C. D. Hann, Marjorie Haynes, I. Kovolman, H. A. Ledgard, S. L. Lord, G. H. Lowe, T. H. Monies, G. Thompson, R. P. Viret, and J. Walker.

D.P.H.

G. R. Baxter.

D.P.M.

H. Edelstein, K. C. L. Paddle, and J. Russell.

The West Riding Panel Practitioners' prize in medicine has been divided between H. G. Garland and S. J. Hartfall. The Littlewood Prize in anatomy has been awarded to P. R. Allison.

MEDICAL SOCIETY OF LONDON.—The second half of the session will open on Jan. 10th at 8.30 P.M. with a presidential address by Sir Humphry Rolleston on Changes in the Clinical Aspects of Disease, to be followed by a discussion. On Jan. 24th there will be a pathological evening, and on Feb. 7th a discussion on Poliomyelitis will be opened by Dr. Francis Walshe, Dr. Mervyn Gordon, F.R.S., and Sir Thomas Horder. The Lettsomian Lectures will be delivered on Feb. 21st, March 9th, and March 21st, at 9 P.M., by Mr. Donald Armour, his subject being the Surgery of the Spinal Cord and Membranes. Other arrangements for the session include a discussion on Acute Abdominal Emergencies complicating Pregnancy and the Puerperium, to be opened by Dr. J. S. Fairbairn on Feb. 28th, and a demonstration of Lipiodol Injections by Dr. Jacques Forestier on March 14th. The annual oration is to be given by Prof. Harvey Cushing on June 13th.

Medical Diary.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street.

WEDNESDAY, Jan. 5th.—5.30 P.M., COMPARATIVE MEDICINE, TROPICAL DISEASES, AND PARASITOLOGY. Special Joint Discussion on Trypanosomiasis in Man and Animals, to be opened by Dr. W. H. Andrews, Dr. J. Gordon Thomson, Mr. A. L. Sheather, and Dr. P. Manson-Bahr. Other speakers will also take part in the Discussion. 8.30 P.M., SURGERY. Discussion on Abdominal Tubercle. Openers: Mr. H. W. Carson and Mr. V. Zachary Cope (Surgery), Dr. Maurice Cassidy (Medicine). MEDICINE: Members of the Section of Medicine are cordially invited.

NORTH-EAST LONDON CLINICAL SOCIETY.

WEDNESDAY, Jan. 5th.—4.15 P.M. (at the Prince of Wales's General Hospital, N.) Discussion, Puerperal Sepsis. Speakers: Mr. A. E. Giles, Mr. T. H. C. Benians, Mr. A. Goodwin, and Dr. D. Kirkhope.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

WEST LONDON POST-GRADUATE COLLEGE, West London Hospital, Hammersmith, W.

MONDAY, Jan. 3rd.—10 A.M., Mr. MacDonald: Genito-Urinary Operations. 2 P.M., Mr. Donald Armour: Operations.

TUESDAY.—10 A.M., Medical Registrar: Clinical Methods. 12 noon, Dr. Burrell: Chest Cases. 2 P.M., Mr. Sinclair: Surgical Out-patients.

WEDNESDAY.—2 P.M., Mr. Tyrrell Gray: Operations. 2 P.M., Dr. Owen: Medical Out-patients.

THURSDAY.—2 P.M., Mr. Bishop Harman: Eye Department. 3 P.M., Sir Henry Simson: Gynæcological Wards. 4 P.M., Dr. Snowden: The Development of the Mind.

FRIDAY.—10.30 A.M., Dr. Dowling; Skin Dept. 1 1A.M., Dr. Pritchard: Modren Methods in Medicine. 2 P.M., Mr. Vlasto: Throat, Nose and Ear Dept.

SATURDAY.—9.30 A.M., Dr. Burnford: Bacterial Therapy. 10 A.M., Mr. Banks-Davis: Operations on Throat, Nose, and Ear.

Daily, 10 A.M. to 5 P.M., Operations, Medical, Surgical, and Special Out-patient Departments, Saturdays, 10 A.M. to 1 P.M.

ROYAL NORTHERN HOSPITAL POST-GRADUATE COURSE.

TUESDAY, Jan. 4th.—3.15 P.M., Mr. L. E. Barrington Ward: Gall-stones.

POST-GRADUATE HOSTEL, Imperial Hotel, Russell-square, W.C.

TUESDAY, Jan. 4th.—9 P.M., Dr. C. E. Goddard: Lord Lister, by one who knew him.

THURSDAY.—Mr. Philip Turner: Imperfect Descent of the Testis.

Notes, Comments, and Abstracts.

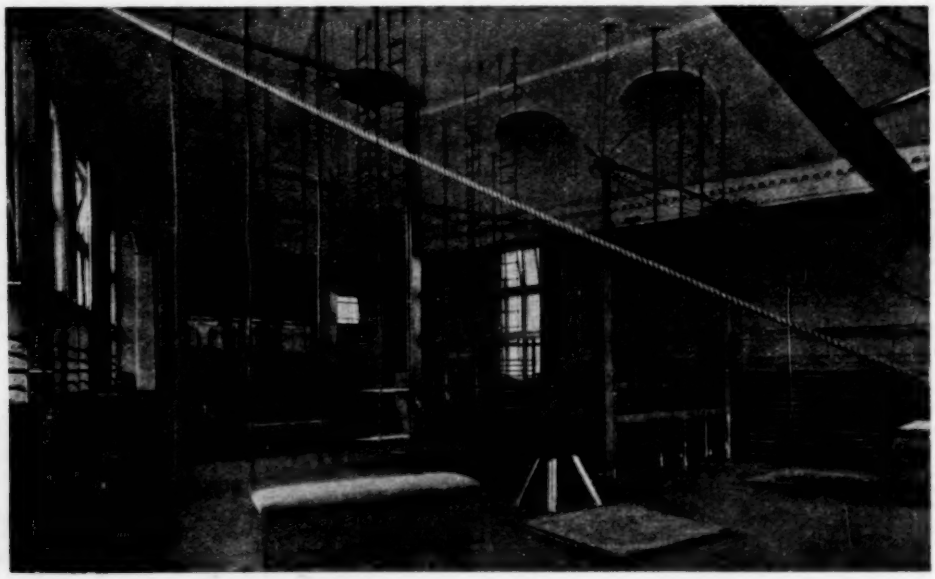
AN INSTITUTE FOR THE PHYSICAL TRAINING OF BOYS.

BY W. H. BATTLE, F.R.C.S. ENG.,
CONSULTING SURGEON TO ST. THOMAS'S HOSPITAL.

A RECENT visit to the Lucas-Tooth Institute (St. Olave's Institute, Bermondsey) has convinced me that the directors are doing valuable work in a very unostentatious manner for the benefit of the boys of London. It was founded by the late Sir Robert Lucas-Tooth, who contributed a sum of £50,000 to give the scheme a start. The main purpose is to train leaders for boys' organisations in order that they, in turn, may act as instructors and organisers in their various clubs. All persons attending the classes must be bona fide members of a boys' club, cadet corps, or similar organisation, and must be recommended for the course by their respective club managers or officials. The latest date for enrolment is Sept. 15th of each year. A gymnastic kit is provided for use during instruction, but remains the property of the club. The course terminates in the second week of July of the following year. Regular attendance from 8–10 P.M. on at least one evening a week is essential, as the nature of the work is progressive; for those able to attend at 7.30 P.M. a special vaulting class is given. No payment is taken from the pupils. The course consists of physical training, physical exercise, class-taking, recreational games, boxing, self defence (jiu-jitsu), and ground work. Those reaching a satisfactory standard are awarded a Lucas-Tooth Badge and become eligible for a continuation course.

The gymnasium (which is illustrated above) is a splendid well-ventilated room with top-lighting surrounded by apparatus. The whole floor is covered with cork matting, which renders any slip during exercise almost impossible and breaks the falls which may sometimes take place beyond the space covered by the usual gymnastic mattresses. For the jiu-jitsu exercises the pupils are on special grass mats as used in Japan for this method of training. The cork matting also renders the movements of even a very large class unusually quiet. The whole of the gymnastic fittings appear to have been judiciously chosen and carefully secured, whilst everything in the place is clean and orderly. In the dressing-room each pupil is supplied with a peg in a locker, and there is ample washing accommodation, with hot and cold taps, and shower baths. On the side opposite to the dressing-rooms, above a stairway, there is a coffee bar, behind a balcony provided with seats, where light refreshment can be obtained, and still higher up the stairs is a room with a punch-ball.

On the evening of my visit the advanced pupils were undergoing a special instruction course which varied from physical and gymnastic exercises to boxing and jiu-jitsu. The last event was a game of (Lucas-Tooth) hand-ball, which concludes every evening's work. In this all those under instruction join and equal numbers appear on opposite sides. It is a strenuous game and five minutes each way is quite sufficient for the players, who are, however, wonderfully keen throughout, but always good tempered. In fact, the spirit in which everything was done was admirable, and the instructor was not only obeyed but willingly obeyed. For the two hours under which the boys were under observation they did not appear to have a dull moment, whilst the noisy chaff and merriment amongst them when in the dressing-rooms afterwards gave evidence of their appreciation of the training and physical fitness.



The Lucas-Tooth (St. Olave's) Institute at Bermondsey.

The management of the training is in the hands of Major W. K. Garnier, so well known in former years as the superintendent of physical training in the Royal Marines, and Captain W. A. Pinkerton (late Royal Marines). There is also an assistant, Mr. J. Cassford (late R.N.), who always appears to be where assistance is required by a hesitating or backward pupil. Visitors who would like to see the Lucas-Tooth Institution and form their own opinion regarding it, and the work done there, are welcomed on any day in the week between 7.30 and 10.30 P.M. excepting on Saturday and Sunday. I have heard of no institution equal to it.

MATHEMATICS FOR NON-MATHEMATICIANS.

STUDENTS of economics and statistics will be grateful to Mr. D. Caradog Jones and Prof. G. W. Daniels for having written a little book on the Elements of Mathematics (University Press of Liverpool, Ltd., Hodder and Stoughton, Ltd., London, 1926, pp. 240, 8s. 6d.), designed for those who have had only a slender training in mathematics. The authors assume in their readers no mathematical knowledge beyond a matriculation standard, and the reader is led on through progressions, logarithms, and binomial expansions to coördinate geometry and calculus step by step with the intellectual equipment of a school-leaver. It is not an easy path, and one which will require constant and diligent attention on every page, but at no place is help needed from any outside source. The fourth part of the book provides an example of the utility of mathematical ideas in economic theory, and will afford the reader who has loyally toiled through the first three parts the satisfaction of achievement. We warmly recommend the book to all who would like to get an insight into the means by which the expert economist and statistician reach their conclusions, an insight which has heretofore been debarred to many by the impression that transcendental mathematical ability is required. The book is admirably printed and arranged for the purpose in view.

HEALTH AND SICKNESS IN THE NURSERY.

ANY book offered to the mothers of the nation by Dame Mary Scharlieb is likely to be gratefully received by them as an aid to the recognition of children's ailments, and an indication of the more elementary forms of nursery treatment. The first chapters of Health and Sickness in the Nursery [1] give general information on the characteristics and requirements of infants and small children. The rest of the volume consists of an outline of the symptomatology and the elements of treatment of most of the diseases met with in childhood. The book may claim to meet the requirements of the mothers of the Empire, since plague, cholera, and yellow fever are among the nursery complaints described. Perhaps the most useful chapter is the one containing an account of the symptoms produced by various common poisons, and their immediate treatment.

SWEDISH RACE-HYGIENE.

Mr. Bernard Shaw recently expressed a wish that the value of the Nobel Prize refused by him should be devoted to the diffusion of knowledge of things Swedish in England. The Swedes, however, are perhaps the most self-conscious and best self-advertised among the Nordic nations. It is only a few years since two eminent scientific Swedes published an exhaustive account of what in Sweden is termed race-hygiene, a term not yet in use here. The full title of the book is "The Swedish Nation in Word and Picture. A Jubilee Book given out with the Coöperation of Experts commissioned by the Swedish Society for Race-Hygiene. By H. Lundborg, M.D., Professor, Upsala; and J. Runnström, D.Ph., Lecturer at the University of Stockholm." It was published at Stockholm in 1921, and with its many illustrations of fine Swedish race-types, ranging from nobles and bishops to singularly distinguished-looking peasants, it is really a delightful book to peruse and possess. It does not, however, appear to have been circulated to any but learned institutions in England, and it was not reviewed in these columns.

From the days of the Reformation, which took such firm hold of the country that Lutheranism there has often proved a form of clerical fanaticism, Sweden has striven by every form of State interference to improve or safeguard an already excellent racial stock. The Gothenburg system, an early form of partial Prohibition, need not be more than mentioned, but what is not so well known as it deserves to be is that the Swedish census is the oldest known census in Europe. It dates from early in the seventeenth century, when it was permissive and in the hands of the all-powerful but well-instructed Lutheran clergy; and so minute and searching is the information it supplies that it is possible to trace with its help the incidence of forgotten epidemics. Another old glory of grandmotherly legislation is the royal enactment of date 1734 (in force till 1915), forbidding epileptics to marry. The law, it appears, was beneficently stretched to include sufferers from mental and venereal diseases. That the law was evaded in remote districts is doubtless true, and these evasions among a wild people would account for the anxiety of legislators to meddle on every occasion with personal liberty and for the emergence of the ill-starred Lister family in the extreme south-west of the country, a large number of whom have been myoclonic epileptics, as well as ordinary degenerates and criminals. Where the Swedes are in a foreign land, warring or sustaining themselves as a remnant of civilised men among lower races and cultures, it becomes impossible to legislate and an appeal only can be made to them. Such an appeal is the fine and rather pathetic document issued by the Society for Improving Public Health in Swedish Finland, which is itself a committee of the Florin Commission, appointed by the Swedish Literary Society in Finland to administer a munificent legacy left them by Miss Jenny Florin in 1911. This lady in her will left 100,000 Fmk. to the Literary Society on condition that the interest of the fund should be used to promote medical science. The proclamation, issued to the Swedish population of Finland as an illuminated card, contains what cynics might take to be counsels of perfection. "On our own will," it begins, "on our innate power ultimately depends the future of the Swedish race in our country. A people mentally and physically strong can hold out even under hard outward pressure!" You must direct your attention to the children, that they are born with a good disposition, that they be well cared for and educated. You must be careful to marry only into healthy families, and be on your guard against strong drink and sexual disease. "The best inheritance you can give your children is not money and gold but a sound mind in a sound body!" Those who own a piece of ground are adjured not to sell it, however much they may be tempted. "Rather make it your glory and your pride, as your fathers before you, to leave it in an improved state to your descendants!" The farmer's life is the healthiest. "Do not abandon your native place. . . . Above all, do not move into town! Teach your children to love truth and keep their word. Harden their wills: teach them the value of diligence. . . . Briefly: all members of our Swedish race should be educated to become honest and diligent workers for their native place and their fatherland! *There must be no bad Swedish men and women in this country!*"

This is a document worthy of the Stoics of old.

[1] London: Williams and Norgate. 1926. Pp. 264. 6*s*.

QUEEN SQUARE.

LONDON is changing so fast, and so many old landmarks are daily disappearing in the rage for what is euphemistically called "improvement" that any history of things as they used to be is of value. Queen Square which used to consist of beautiful Queen Anne and early Georgian houses, the abode of persons of quality and of a school known by the delightful name of "The Ladies Eton," together with a singularly ugly church described by Maitland in 1756, as "a perfectly plain and most inelegant brick building," has to-day seen the replacement of most of the houses by hospitals and other institutions. The church is still there. The hospitals include The National Hospital, the Alexandra Hospital, the Italian Hospital, and the Homœopathic Hospital, while the Children's Hospital in Great Ormond-street is not far away. It is owing to the love of Mr. Heathcote Hamilton, Secretary of the National Hospital, for the district in which the hospital is situated that we owe a charming account[1] of the site. The new hospitals and institutions have fortunately not swallowed up all the old buildings, for Nos. 29 to 32 are now the property of the National Hospital, and a glance at the excellent photographs of the interior of 29 will show how beautiful an early eighteenth century house could be. Mr. Hamilton has collected a number of interesting facts about the Square in its early days, and its inhabitants. At the Ladies Eton, which was kept by Mrs. Dennis and her brother Admiral Sir Peter Dennis, was educated a child by name Hester Salusbury, known to fame afterwards as Mrs. Thrale, and Mrs. Piozzi who says in a letter circa 1750, how the Admiral "said I was qualified at 8 years old to be teacher rather than learner, and he actually did instruct me in the rudiments of navigation, as the globes were already familiar to me." Of the gradual change from a purely residential quarter into an institutional one Mr. Hamilton's pages give an admirable moving picture.

HEALTH CONDITIONS IN CYPRUS.

IN the annual report recently issued it is stated that the estimated population of the island at the end of 1925 was about 330,000. The bulk of the inhabitants are of the orthodox Greek-Christian faith. Of the remainder some 60,000 are Mohammedans. There is also an Armenian community, which tends steadily to increase, and a distinct though not numerous Latin colony. Except for the endemic prevalence of malarial fever, the climate of Cyprus is healthy and temperate, and, with proper precautions, there should be no difficulty in enjoying complete immunity from this disease. The heat and humidity during the summer months impose a certain strain, but access to the hills is easily practicable within a very short distance. The climate during the winter might almost be described as ideal, combining as it does invigorating cold with clear sunshine. The continued dullness of more northern climes is seldom experienced, and a rainy day is invariably succeeded by a cloudless sky.

Public health in 1925 was again good, and no outbreak of epidemic disease is to be recorded. In contrast with all the neighbouring countries of the Levant and the Near East, Cyprus is entirely free from plague, typhus, and other virulent diseases, and stringent quarantine measures are in force against their introduction. Phthisis has again demanded and engaged the especial attention of the medical authorities, the number of cases reported being greater than in 1924. Statistics relating to this disease are not, however, wholly to be relied upon, for persons afflicted with it have, in the past, brought considerable pressure to bear to avoid being reported. The construction of the Government sanatorium has now been completed, and the new buildings, situated in most healthy surroundings four miles from Nicosia, are ready for the admission of patients. As hitherto, the prevailing diseases, other than malaria and phthisis, were those of the digestive and respiratory systems, influenza, diseases of the skin, rheumatism, and enteric fever. There has been a most noteworthy decrease in the number of cases of enteric fever, following the improvements effected to the water supplies of the towns and villages. Cases of trachoma have been on the increase, the numbers having risen from 393 in 1924 to 545 in 1925.

[1] Queen Square: Its Neighbourhood and its Institutions. By Godfrey Heathcote Hamilton, Secretary, National Hospital, Queen Square. London: Leonard Parsons. 1926. Pp. 146, 10*s*. 6*d*.

This unfortunate development has engaged the earnest attention of the medical department; and to assist in combating the disease it is intended to increase the staff of the Nicosia General Hospital by engaging the part-time services of a qualified oculist. The malarial statistics are of great interest, and afford satisfactory proof of the value of the special antimalarial campaign conducted in 1924. Though the total number of children examined shows an appreciable increase, the spleen rate, by which the prevalence of malaria is commonly measured, fell from 13·5 to 9·8 per cent. This rate is even lower than that recorded in 1923, since when a much stricter check has been kept on the returns rendered by the medical officers in the districts. The decrease in the spleen rate for the six towns is still more marked, and the rate is now as low as 2·3 per cent.

The total number of births registered during 1925 was 7803, being 23·6 per 1000 of the population, as against 8946, or 27·3 per 1000, in 1924. The deaths registered numbered 4769, being 14·4 per 1000, as against 5703, or 17·4 per 1000, in 1924. There were two Government-maintained hospitals (Nicosia and Limasol) and four Government-aided hospitals in operation during the year, as well as 19 rural dispensaries and eight branch dispensaries. These dispensaries have been well attended, over 18,000 patients being afforded treatment. Almost 900 patients were admitted to the Central Hospital at Nicosia, which is fitted with 56 beds, and the out-patients treated numbered more than 10,000; 122 surgical operations were performed. A special feature of this hospital is the maternity side and the attention there given to the training of midwives. At the close of the year 113 inmates were detained at the lunatic asylum, as against 107 at its commencement; 25 persons were discharged as cured, and 11 died; the number of new cases admitted was 42. Lunacy in Cyprus is generally of a mild form, and restraint had to be resorted to in three cases only. Employment is found for some of the inmates indoors, while some are employed in keeping the grounds in order. The number of lepers admitted to the leper farm—which is run on the lines of a village, with its own church, mosque, and schools—showed a decrease, the total detained at the close of the year being 80, as compared with 85 in December, 1924. There were 11 deaths, all of which were advanced cases of the disease. Some of the inmates have been treated with intravenous injections of chaulmoogra oil, moogral, and preparations of antimony. In nodular cases the treatment has been successful in producing the disappearance of the nodules and the growth of eyebrows. Leprosy in Cyprus is well under control, and hopes are entertained that it may be possible in time entirely to eradicate it from the island. The number of children at the end of the year in the home for the healthy children of lepers was 10, all of whom remained free from any sign of the disease.

UNIVERSITY OF LONDON.—Dr. H. S. Stannus has been awarded the degree of Ph.D. in Science.

ROYAL INSTITUTION.—Next week Prof. A. V. Hill will continue his course of juvenile Christmas lectures on Nerves and Muscles: How we Feel and Move. His subjects will be the Lungs and Blood (Jan. 4th), Nerves and Muscles Working Together (Jan. 6th), and Speed, Strength, and Endurance (Jan. 8th). The lectures are at 3 P.M. at 21, Albemarle-street, London, W. 1.

JAMES MACKENZIE INSTITUTE FOR CLINICAL RESEARCH.—On Dec. 7th Prof. G Lovell Gulland gave a lecture on High Blood Pressure, Albuminuria, and Glycosuria in Relation to Life Insurance. It was the general rule nowadays, he said, to ask for an estimate of the blood pressure in all proposers over 50 years of age. It was a useful guiding principle that any pressure above 150 mm. should be regarded with suspicion, bearing in mind the fact that excitement alone might cause a rise of 20–30 mm. over the true reading. Albuminuria should always be regarded as a sign of possible renal mischief, and Prof. Gulland quoted instances where an albuminuria apparently utterly unimportant had terminated in a definite nephritis. Reviewing the subject of adolescent albuminuria he laid stress on the importance of examining the urine passed first thing in the morning. If this urine was free from albumin it was, as a general rule, safe to pass the proposers. He doubted the value of renal efficiency tests in these cases and in mild nephritics. Even the symptomless type of glycosuria occurring in older people was not a safe risk to accept as the patients might develop the severe form. Repeated tests were needed, for in a proportion of them sugar might be absent, although the patients were prediabetic cases, and should pay a heavy extra premium. The only sure method of excluding renal glycosuria and lag-curve cases was by means of a full blood-sugar curve.

Appointments.

CATTLE, FANNY, B.Sc., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the West Green district of Tottenham.

HARTLEY, J. N. J., O.B.E., M.D., Ch.B. Edin., F.R.C.S. Edin. and Eng., Honorary Surgeon to the Cumberland Infirmary, Carlisle.

KING, J. C. (Miss), M.B., Ch.B. Edin., D.P.H., Assistant Medical Officer to the Cheshire County Council.

MCDONALD, NIEL, M.B., Ch.B. Manch., M.R.C.S., L.R.C.P. Lond., Anæsthetist to the Hospital for Sick Children, Great Ormond-street.

MASON, J. WRIGHT, M.B., C.M. Aberd., Examiner in Forensic Medicine in the University of Edinburgh.

STANNUS, HUGH S., Ph.D., M.D. Lond., M.R.C.P. Lond., D.T.M. & H., Examiner in Tropical Medicine, University of Liverpool.

Queen Charlotte's Maternity Hospital, Marylebone-road, N.W.: CLEMMEY, A. V., M.B., Ch.B., Senior Resident Medical Officer; CHISHOLM, W. N., M.B., Ch.B. Edin., Assistant Resident Medical Officer.

Certifying Surgeons under the Factory and Workshop Acts: SHAND, J. G. B., M.B., Ch.B. Edin. (Woolpit, Suffolk); HEATON, E. H., M.R.C.S., L.R.C.P. Lond. (Clacton-on-Sea).

Vacancies.

For further information refer to the advertisement columns.

Birmingham, Highbury Group of Hospitals.—Jun. Surg. O. £350.

Exeter, Royal Devon and Exeter Hospital.—Sen. H.S. £210. Also H.P. At rate of £140.

Holborn and Finsbury Hospital, Archway-road, N.—Second Asst. M.O. £300.

Hospital for Consumption and Dis. of Chest, Brompton, S.W.—H.P. £50 for six months.

Huddersfield, Bradley Wood Sanatorium.—Res. M.O. £500.

Hyde Borough.—Part-time Asst. M.O.H. £300.

Lancashire Asylums Board.—Deputy Med. Supt. £600.

Leeds, City of.—Asst. M.O.H., &c. £800.

London Female Lock Hospital, 283, Harrow-road, W.—First and Second H.S.'s. At rate of £200 and £150 respectively.

Manchester, Ancoats Hospital.—H.P. At rate of £100.

Maudsley Hospital, Denmark Hill, S.E.—Sen. Asst. M.O. £640.

Metropolitan Asylums Board, Mental Hospitals Service.—Second Asst. M.O. £560.

Plaistow Fever Hospital.—Second Asst. M.O. £400.

Royal Army Medical Corps.—Commissions.

St. Mary Abbot's Hospital, Marloes-road, W.—Res. Phys. £350.

Southwark, Metropolitan Borough of.—Asst. M.O.H. £600.

Stoke Newington Metropolitan Borough.—Part-time M.O.H. £700.

Sudan Government Medical Dept.—Two M.O.'s. £E.720.

University College Hospital, Gower-street, W.C.—Hon. Phys. for Children's Dept.

Warrington Infirmary and Dispensary.—Jun. H.S. £175.

West London Hospital, Hammersmith, W.—Hon. S. to Throat, Nose, and Ear Dept. Also Hon. Obstet. Reg.

Woolwich, Metropolitan Borough of.—Asst. M.O. £600.

Births, Marriages, and Deaths.

MARRIAGES.

FREEMAN—DAVIDS.—On Dec. 21st, at the Bayswater Synagogue, Chichester-place, W., Jack Freeman, M.B., B.Ch., L.D.S., to Freda, only daughter of Mr. and Mrs. S. H. Davids, of Hamilton-terrace, N.W., granddaughter of the late Rev. H. Davids.

HUNT—MALDEN.—On Dec. 23rd, at St. James's, Piccadilly, William Thomas Hunt, M.R.C.S. Eng., L.R.C.P. Lond., to Dora Fletcher Malden, A.R.R.C., third daughter of the late Mr. and Mrs. W. T. Malden, of Boddington House, Biggleswade.

MCINTOSH—STONE.—On Dec. 18th, at St. George's, Hanover-square, James Wilson McIntosh, M.B., F.R.C.S., B.Sc.(P.H.) Edin., to Eleanor Charlotte E. Stone, M.B., B.S., D.P.H. Lond.

DEATHS.

ADAMS.—On Dec. 22nd, Joseph Ebenezer Adams, M.S., F.R.C.S. Eng., of Harley-street, surgeon to St. Thomas's Hospital.

DOWKER.—On Nov. 3rd, at Helmsley, Yorkshire, Elizabeth Dowker, aged 83 years, widow of the late Frederick Woodcock Dowker, surgeon.

HARVEY.—On Dec. 23rd, at Crawford, Godalming, Frederick George Harvey, F.R.C.S.

MASON.—On Dec. 19th, Henry Sinclair Mason, M.R.C.S. Eng., L.R.C.P. Lond., of Glencoe, Sutton Coldfield, Warwickshire, aged 41.

SCOTT.—On Dec. 22nd, suddenly, at Crafnant, Crowborough, Alfred Scott, M.R.C.S., L.R.C.P., formerly of Marine-parade, Brighton, aged 71.

WILMOT.—On Dec. 22nd, E. B. Wilmot, M.R.C.S., L.R.C.P., of Burnham House, Burnham, Bucks.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.